THE
MEDICAL AND SURGICAL REPORTER.

No. 1825. PHILADELPHIA, FEBRUARY 27, 1892. Vol. LXVI.—No. 9.

CLINICAL LECTURES.

SUPRA-PUBIC CYSTOTOMY. — UNUNITED FRACTURES—AMPUTATION OF ANTERIOR PORTION OF THE FOOT.

BY JOHN H. PACKARD, M. D.

SURGEON TO PENNSYLVANIA HOSPITAL, PHILADELPHIA.

The case which I shall present first this morning is one of considerable interest as it illustrates an operation which, practised long ago and then abandoned on account of its supposed dangers, has recently come into vogue again. This old gentleman was brought into the hospital on August 18th, suffering from retention of urine due to a very much enlarged and lobulated prostate; the bladder was distended until it reached far above the umbilicus. We spent very little time in trying to pass an instrument to draw off the water. He was in a wretched condition, and I decided at once resort to supra-pubic cystotomy. This is the easiest of all methods of reaching the bladder, and in cases of enlarged prostate it affords special advantages of which the perineal section is destitute. In this case, the urine flowed away very freely, and the man was immediately and entirely relieved. In order to keep up this condition of relief, a rubber tube was passed into the bladder and his water has been drawn off continuously by that means. Now it will not do for the man always to go with a rubber tube in his bladder, because, as you can readily see, it will be difficult to manage and hard to keep clean. Therefore to-day I am going to try to introduce a curved glass drainage tube; fitted exactly to the bladder in its relation to the wound and to surrounding structures. Such a tube will drain without any trouble, and will not soil his clothes.

The incision which I made in this case was about four inches long, directly over the bladder, the condition of which gave us a perfect indication of the point at which it was to be entered. I cut through the skin and superficial fascia, the deeper layer of the fascia, the rectus and pyramidales, and then came to a layer of fat which was triangular on section; and just below that, the bladder was distinguishable by its grayish-blue color, and by its longitudinal fibres of muscle which are in its wall. At this point I took hold of the bladder with a tenaculum and opened it, so that I could pass the rubber tube into the bladder, as you see. Now I am going to pass the glass tube in and see if it fits perfectly; and if not, I shall have another made. Then I will fasten a rubber tube over the double shoulder which is on the end of the tube, and which it would be well to have on all drainage tubes used after abdominal operations.

On passing this tube I find it is a little too long and would press on the mucous membrane of the floor of bladder, and there is a tendency to push the tube out, due to contraction of the muscular pelvic floor. Pain in the bladder causes this spasmodic action of the levator ani. I will replace the rubber tube for the present and will have another glass tube made, about one inch shorter, and then I think it will fit exactly into the bladder. On this will be put a rubber tube and this will be closed with a clip. With this arrangement, the man will be enabled to go about, and when he feels that the bladder needs to be emptied, he will merely have to release the clip.

This operation was done over three hundred years ago—many times in the last century, and in the early part of this one. But care was not properly taken to avoid injuring the peritoneum or to drain the bladder. So the operation was often complicated by infiltration of urine or by traumatic peritonitis. A very distinguished London surgeon of the last century used to inject water to distend the bladder previous to this operation, sometimes to the point of rupture; and several accidents of that kind having happened, surgeons gave up the supra-pubic for the perineal operation. Now the fact is, that this

operation is very much easier than the perineal operation. We cannot miss entering the bladder, and it is only in exceptional cases that the peritoneum extends very low down towards the symphysis pubes. For myself, I would much prefer this procedure, when the bladder is distended, as in cases of impermeable stricture, in the hands of an inexperienced surgeon, to the perineal section. The operation has gained great favor in the last four or five years, although its revival was at first regarded with a great deal of doubt. My first experience with it was in 1883, in the case of a man who had in the bladder a large shawl-pin, which could be felt above the pubes. I suggested to the physician that the operation above the pubes would be the best. It was done with perfect ease. After that I had a number of cases in which I entered the bladder in this way, and it seemed to me advisable to call attention to this operation again. Somewhat to my surprise, I found that several surgeons had already had a somewhat similar experience; and it seems likely that this method of entering the bladder may to a great extent supersede that by way of the perineum.

UNUNITED FRACTURE.

This young man has had a fracture of the humerus. The bone failed to unite, and there was considerable loss of substance, and you will see that the fractured arm is much shorter than the other. He came in here after several attempts to produce union, and I determined at first to cut off the ends of the bone and wire them together. When I came to lay them bare, however, the bone was so soft (this is often found to be the case in ununited fracture where there is loss of substance) that it would not hold the pegs or ligatures. I therefore simply drilled the bones and had the arm dressed, which I think will give a satisfactory result. I am told the arm is much firmer, and I find there is a considerable degree of consolidation about the fracture.

I will just call your attention to the line of invasion, which was at the back of the arm, because we could there lay bare both fragments without any very extensive incision, and we avoided all risks of injuring important nerves or blood vessels.

The methods of dealing with cases of ununited fracture are very varied, as you probably know, and the results obtained, unfortunately, are sometimes far from what we could wish. In this case, the youth of the patient and his vigorous health and the soundness of his tissues is favorable generally. I hope he will have a good and useful arm, by which he will be able to earn his living.

The loss of substance of the bones of the arm is a curious clinical fact that has never been explained, so far as I know. There are cases where the entire bone has been absorbed, from the shoulder to the elbow. I have seen another case in which six inches of the bone were lost. However, in that case, even had we succeeded in uniting the ends, it would have been useless, as there was anchylosis of the elbow. And that is another point in all ununited fractures, which in this case we were not able to attend to. Where you have charge of such a case from the first it is important to keep the elbow joint as free as possible, by constant passive motion, to prevent stiffening of the joint.

AMPUTATION OF ANTERIOR PORTION OF FOOT.

The next case is a boy, the anterior portion of whose foot I amputated last Saturday afternoon. It has not been touched since then, and we will see what its condition now is. This boy, who was in good health, had the front part of his foot run over and crushed by a railroad car; it was necessary to take off a larger portion of the foot than I would like to have done. In this case, as you will readily understand, the foot being a lever upon which the patient walks, the risk was that contraction of the tendo Achillis would draw up the short stump, and that when the boy walked, instead of treading on the heel, his weight would come on the stump, which would be tilted down. In order to prevent that, I divided the tendo Achillis and brought the heel down, so that the boy will walk fairly upon what is left of the sole of his foot. That is a very important point in all foot amputations.

I call your attention to this case because, within a very short time, a distinguished surgeon has made a statement which has been backed by others, that where the front part of the foot is damaged, the amputation should be made about five inches below the knee. I could not make such an amputation when I could give this boy a good heel to walk upon.

In this case we meet with what is almost always met with in amputations of the foot, and that is a great deal of hæmorrhage. I presume the time occupied in stopping the hæmorrhage was at least four times as long as that of operation or even of etherization.

On my taking off this dressing you see where the heel is now. It is not turned up at all, as it would have been if the tendo Achillis had not been divided. The operation having been done under strict antiseptic

precautions, the stump is in a perfectly healthy condition. In former times, after amputation of this kind, the wound was always dressed the next day; the day following we generally found some suppuration, and the third day there was generally free suppuration, which we thought a most excellent thing. The stump had to be squeezed, and required dressing every day, causing a great deal of pain for the patient and a great deal of trouble for the surgeon, which is now avoided.

In this case I left only the astragalus and os calcis. That is not the best operation when you can help it; it is better to leave more of the foot, for then the patient has more leverage for walking, but I think you will see that this is very likely to make a good stump. By having a stiff boot, with a sole that will give some spring, the boy will have a foot that will give him an almost natural gait.

What I want to lay special stress on in this case is that the natural heel is better than any artificial leg that can be made. Moreover, in spite of antiseptic precautions, the risk still remains that amputations are more dangerous the nearer they approach the body.

In this stump we used a cat-gut drain and there is no necessity for disturbing it, as the portion within the stump will be absorbed and give no trouble. The stump now needs only a re-application of the dressing. This will not be removed for ten days, unless there is some indication for disturbing it. Probably that will be the last dressing required. The stump has, in this case, been enveloped in sublimate gauze, and you will see that there is no irritation whatever of the skin. You will find that the sublimate gauze sometimes causes an irritation of the skin and occasionally a copious eczema. Such cases are, however, so rare that we generally use the sublimate gauze until we find that it produces irritation.

RANULA.

Briz, of the General Hospital, Madrid, mentions a case of one of these tumors, as large as a hen's egg, which he cured in a very simple way. The contents of the tumor were too thick to be aspirated with a hypodermic syringe, and fifteen minims of the following solution were injected twice, at an interval of three days, and effected a permanent cure:

℞ Potassii iodidi.....gr. vi.
Tinct. iodini,
Aquæ destil.....aa f 3 i.
M.

—*La Andalucia Medica.*

A DAY'S EXPERIENCE IN ELECTRO-GYNÆCOLOGY.*

By G. BETTON MASSEY, M. D.,
PHILADELPHIA.

Ladies and Gentlemen:—Before proceeding to the special subjects of this evening's lecture, I desire to say a few words on the attitude that should be maintained by the rational physician in studying the diseases of women. It is probable that no other body of scientific workers has displayed as much personal bias in approaching practical questions as has the medical profession. This is doubtless because its work consists in an analysis of the most complex question of all: man—the acme of creation, and hence the most difficult question to understand in all nature. Lacking complete knowledge of its work, its individual members become unduly impressed with those things they do know, and are ever ready to draw general conclusions from imperfect premises. And if man, as a whole, is so difficult of complete conception in his weaknesses and diseases, how much more so is woman, that gentler and more delicate half of man, with the added refinements of structure and function that characterize her sex? It could only have been this bias in the minds of investigators that could lead them to regard the diseases of women as merely mechanical and surgical. So dominant have become the few things that surgeons do know that all else is forgotten, and we are gravely assured on all hands that gynæcology is but a branch of general surgery. This designation of a part as the whole would concern us but little if it did not constitute the working creed of the most active practitioners of the day, who are, in the midst of much good work, rearing another of those tidal waves of excess that threaten in the inevitable recoil to sweep away their own well-founded work. What has womankind done that renders her pelvic ailments so different from the functional and organic derangements of other parts of the body?

True gynæcology is a broad consideration of the ailments peculiar to women, and thus deals not only with morbid growths and physical deficiencies, but also with an association of functions of so delicate a nature as to be comparable only with those within the cranium. By reason of the abundant sup-

* A lecture delivered at the Philadelphia Polyclinic and College for Graduates in Medicine.

ply of spinal and sympathetic nerves within the pelvis, and the overshadowing importance of nervous phenomena in its three great functions, menstruation, procreation, and gestation, gynæcology should rather be considered a department of neurology than of surgery. With this thought in view how unsatisfactory are our present text-books; and could not something be gained by re-examining our present views of the importance of mechanical deviations in derangements of these functions? Much is said of disorders of menstruation and gestation, it is true, but how little of disorders of the procreative function, imperfections in which, I believe, are at the bottom of a large proportion of the most annoying troubles for which we are consulted. We hear much of lack if virility—why not also of a lack of femininity?

To regulate, conserve and restore function should be our aim in gynæcology, rather than blind amputation of parts we think defective, and hence the physician with his remedial measures has the first right to the field. Neglect of this common-sense rule is daily adding to the host of unnecessary mutilations with which women have been afflicted of late, and has filled many an untimely grave. The careless way in which grave operations are suggested and performed was strikingly illustrated the other day in my service at the Dispensary for Women, where a patient applied for treatment for a pain in her side and slight menstrual irregularity. Examination revealed no apparent deviation from physical normality. She had been sick but six weeks, yet had been advised at another dispensary to have the appendages removed at once. Such an occurrence gives us an inkling of how that other dispensary furnishes a well-known operator with an unusual abundance of material.

But dispensary work gives us an imperfect view of the daily problems of gynæcology. It is the private patient that taxes our skill to the utmost, as it is well known that certain faults in the higher civilization of the day tell especially against the normal performance of function; hence a full illustration of the particular subject of this lecture—the value of electrical applications in regulating, conserving and restoring pelvic organs and functions—requires that both classes of work be represented. I shall therefore take you in fancy with me into office practice, as well as to clinics to illustrate the experiences of a day in electro-gynæcology.

MENORRHŒSPASM.

I wish you first to consider a case seen to-day at the Dispensary for Women. Imagine a well-proportioned, otherwise healthy married woman of 28, who complains only of a menstrual pain and intermenstrual tenderness. Since puberty she has suffered from an aggravated example of that periodical pain that is the bane of so many young girls and older women—a condition to which I gave the name of menorrhœspasm, with its attendant menorrhalgia, some two years ago. Her former physician preferred to call it by the older name of dysmenorrhea, and the tenderness that is now found to the left of the apparently normal uterus is possibly due to the mechanical view of her condition implied in the use of such a term, for she has been dilated twice. Thus a purely surgical view of a neurotic condition induced the use of a method that she thinks left her worse than before.

Recognizing that the primary disease was but a periodical neuro-muscular spasm, to which had been added a moderate degree of chronic inflammation of the left appendages, she was treated by simple vaginal applications of the galvanic current, 40 ma. positive being applied on a cotton-carbon electrode in the left fornix twice a week. She has now passed three periods without pain, and tells us to-day that she was more comfortable at the last one than at any time before in her life. How did these applications accomplish such results? Doubtless by allaying neuro-muscular irritability; by stimulating metabolic activity in the tissues, enabling them to throw off morbid products and conditions; and by combating congestion by virtue of stimulation of vaso-motor nerves.

RELAXATION.

An interesting case seen to-day in office practice bears out the remarks made a minute ago on the importance of a perfect accomplishment of one of the more delicate functions of the pelvic organs. The lady, a multipara, applied to me some time ago for the relief of a backache, a bearing-down sensation, pains in both sciatic and crural regions, and moderate leucorrhœa. A local examination showed the vagina relaxed and overly congested and sagging. There was also a partial laceration of the perineum, which dated from an early confinement. By close questioning it was brought out that the marital duties were decidedly deficient in normal completeness, though by no means painful. Here was a condition not unlike those found in other organs when suffering from neuro-muscular atony, as, for instance, the stomach in nervous dyspepsia. As in such a stomach true hunger is as lacking as is the ability to

comfortably digest food, so here an attempt at functionation without that most potent sauce, hunger, results in an ever increasing enfeeblement and consequential engorgements and irritations. The fault was clearly not in the relaxed mucous membrane, but in the nerves and muscles behind it, and the result proved the surmise to be correct, for a practical cure was obtained some time ago by alternative applications of the galvanic current (vagino-abdominal) supplemented by two slight intra-uterine applications of the same kind. The latter were given by means of the inoffensive elastic spiral electrode, and were 20 milliamperes strong, and a week apart, giving quick relief from the annoying sensations in the back and limbs, which had no doubt been due to the uterine congestion.

Such quick results could not have been obtained in a more chronic case, particularly if the perineum had been badly torn or the muscular substance of the vagina atrophied; but no clinical fact is more patent to me than that the constrictors of the vagina may be made to contract by swelling applications of the galvanic current when not completely torn from their attachments, for I have repeatedly verified it. Faradic applications are also of service, but not nearly so valuable as the galvanic.

I have called this condition *relaxation* for want of a better term, but it is easily seen that this word refers only to a portion of the trouble. There is need for a scientific term for the condition as a whole. The antithesis of dyspepsia, it is by far more common and more productive of morbid consequences.

FIBROID TUMORS.

Within the past few days I have had the pleasure of seeing two former office patients who were under treatment for fibroid tumors of the uterus some time ago, and who kindly came in to report. The results in both have been excellent, and as they have not been reported before I wish to speak particularly of each. The first case was sent to me by a prominent gynecologist and obstetrician of this city in May, 1890. The patient was 46 years old, unmarried, and had been suffering from hemorrhages and pain for several years. The growth was larger than a child's head, occupying much of the pelvis and extending up into the abdomen to a point three inches below the umbilicus. Intra-uterine applications of from 30 to 100 ma. were begun and continued for a number of months, the applications being at times negative and at others positive. Prompt relief of pain and hemorrhage ensued, and the patient was shortly able to resume the active life that had long been impossible; but I was discouraged by a lack of real decrease in size. To accomplish this additional result, if possible, I changed the treatment to intra-uterine alternative applications of 100 ma., that is: the current strength mentioned was turned on gradually with one pole, held a half minute, gradually turned off, and the same procedure repeated with the commutator reversed, applying each polarity about six times at each sitting, the sittings never being closer than a week. By this method chemical electrolysis and its attendant local action was reduced to a minimum, while a maximum galvanic constringent action was obtained, with its attendant effect on nutrition. The good effect of this change was soon manifest, the upper extremity of the tumor receding to four inches below the umbilicus in three weeks, and five inches in eight weeks. The treatment was discontinued by me shortly afterwards, and the patient was asked to return at intervals for examination, which, however, she was unable to do until nearly six months had elapsed. At that time (Sept., 1891) I was astonished to find that the tumor had continued to decrease in size without treatment, and was entirely within the pelvis. When seen to-day there was practically no tumor, the enlarged uterus being guyed to the pelvis in various directions by bands of adhesion that had formerly embraced the tumor itself. The symptomatic cure was equally perfect. The tumor in this case was of the smooth, hard variety.

In the other case the tumor was three-lobed, much larger, and filled the lower portion of the abdominal cavity up to a level with the umbilicus. In constitution it was doubtless more myomatous than fibromatous, as the characteristic menorrhspasm was prominent, she being compelled to remain in bed under the influence of morphia at each period. Under simple intra-uterine treatments of the usual kind, interspersed with vaginal applications, this enormous growth has become gradually absorbed, leaving a uterus that differs from others only by being still nodular, and so mobile as to become easily displaced.

UNIVERSITY ALUMNI DINNER.

The Alumni of all departments of the University of Pennsylvania propose to give a dinner on Saturday, February 27, 1892, at Musical Fund Hall. Eminent speakers among the Alumni are expected to be present. Any graduate of the University desiring to attend may send his check for the amount of subscription, ten dollars, prior to February 17, to John Douglass Brown, Jr., treasurer, 519 Drexel Building.

COMMUNICATIONS.

A FEW OBSERVATIONS ON DISEASES WHICH IMPLICATE THE HIP, KNEE AND ANKLE JOINTS DURING CHILDHOOD.*

By THOMAS H. MANLEY, M. D.
VISITING SURGEON TO THE HARLEM HOSPITAL, NEW YORK CITY.

KNEE-JOINT DISEASES.

The knee-joint being wholly devoid of any muscular envelope laterally or anteriorly, morbid changes affecting its synovial sheath, cartilage, ligaments or bone are more easily recognizable than in an articulation more deeply lodged; and hence, a morbid action in this situation will not, as often here, escape detection in its early stages as in the hip joint. The epiphyseal cancellous heads of bones which form this articulation are very large and have vast articulating surfaces. The ligaments at the knee are more numerous and powerful than in any other articulation in the body. Its synovial capsule, practically divided into four pouches by the patella, is of considerable capacity, of great elasticity, and capable of immense distension. The condyles rest on and play over an extensive area of articulating surface. That formed by the tibial head is very resilient and elastic, thereby effectually guarding against sudden or violent concussive force. The fibro-serous investment of the knee-joint is a very thick, elastic membrane, which is highly vascular. The absorbent power of the synovial capsule is very great; hence, sanguineous, serous or purulent accumulations within it are often quickly disposed of.

Rheumatic and neuralgic affections are very common in the fibrous structure of the knee, the former in the acute and subacute varieties attacking one or both joints. Every one is acquainted with those vague, shooting pains through this joint in childhood during the stages of active growth. Congenital syphilis plays an important rôle in many affections of the knee in which the cellular elements of the medulla, bone and perichondrium are the seat of inflammatory changes.

As the knee-joint is powerfully acted on by muscles of great volume and strength, it follows that functional or organic changes, either within, or exterior to their sheaths, will more or less impede knee action. Their tendons, behind and anteriorly, contribute largely towards maintaining firmness in the joint; hence, are practically accessories to the ligaments.

The most common morbid processes in the knee-joint in childhood are of a rheumatic or tubercular origin. As the question of diagnosis will not be considered here, signs, symptoms, or clinical history will be referred to only when necessary.

Rheumatic inflammation is comparatively of infrequent occurrence in early childhood, and, when present, is not accompanied by a peculiar and characteristic cachexia as is strumous disease. Unlike tubercular invasion, the onset is sudden and is usually attended with a marked hyperexia. We are concerned here only with the non-arthritic, intermittent phase of it. When the fibrous elements of the muscle sheaths, the intermuscular septa and the thecæ of the tendons participate with severe, acute rheumatic arthritic inflammation, it may end in the complete destruction of function in a joint. When the knee or ankle is the seat of rheumatic inflammation, it is much easier of recognition than when the femoral articulation above, is thus involved. In rheumatic arthritis at the knee, synovial effusion is commonly large and promptly appears with the advent of the disease; to the hand, in the early stages of rheumatic inflammation, the integuments will feel dry and hot. It is seldom if ever, we encounter in the unmixed disease that enormous subcutaneous infiltration which gives to the skin the thinned, atrophied and smooth, blanched appearance so peculiar to tubercular arthritis or osteitis. Œdema of the ankle and foot are not commonly seen here; and, although there may be well pronounced joint implication, there is not that tendency to extreme flexion of the leg or the thigh which is seen in tubercular osteitis, arthritis or synovitis. When in doubt as to the presence of a rheumatic element in a given case, one would suppose that the flitting character of the malady and the implication of other joints would decide the question of diagnosis, but, sometimes rheumatism may spend its violence in one articulation. When the synovial effusion is not very great and is wholly serous, with its absorption and the subsidence of inflammation in the peri-arthritic structures, pain and soreness will disappear, and the use of the limb be quickly restored. But, sometimes, there is an abundant effusion of lymph, which is not only freely formed on the joint surface but is likewise elaborated along the muscle and tendon sheaths, which if not absorbed,

* Continued from the last issue of the REPORTER.

may undergo organization. Within the joint this material firmly binds the articulating surfaces together, and in time taking on osseous changes will cause true bony anchylosis. Even when the joint may be quite free, yet a plastic effusion into the muscle sheaths and intermuscular spaces, undergoing fibrous changes, will, in varying degrees according to its site and in proportion to its quality and extent interfere with, or wholly destroy, knee-action.

This is of paramount importance to remember, for it reiterates the fact (though it may seem rather a paradox) that a joint may be immovably anchylosed and yet its anatomical structures remain perfectly healthy. The latter is designated muscular anchylosis, but it may be tendinous. When anchylosis or a mechanically fixed position of the limb is maintained in a youth for a considerable period of time, we will invariably have muscular, adipose and cellular atrophy, with retardation or temporary arrest of growth. Now, it will be noted that in order to relieve intra-articular pressure the patient has the leg flexed to a considerable degree. The tissues covering the capsule are œdematous and dropsical, and feel boggy and non-resistant. The synovial membrane is greatly thickened and distended. The patient has the general appearances of strumor. He is pale, emaciated and badly nourished. When the disease is limited to the synovial membrane, the effusion will be considerable. This may be purely serous, sero-purulent, a sort of a grumous mass of pea-soup consistency, or it may, through pathological changes, have acquired a gelatinous consistence. Besides, when not disintegrated and absorbed, in time its residue will ossify and serve as a cement in effecting bony anchylosis.

In some cases, there will be extensive inflammation in the arthritic structures, without an excessive synovitis. There, as in other joint diseases of a tubercular origin, the presence of pain or muscular spasm is not always a reliable criterion; for, in tubercular caries of the epiphyses its advance may be so insidious as to escape detection until extensive damage has been done.

When the osseous elements of the knee-joint are the seat of an extensive tubercular invasion, all the circumjacent and enveloping tissues in the vicinity of the capsule participate. A low grade of inflammation supervenes which has a marked tendency to run into ulceration, so that, in time, the cartilages give way in places and the perichondrial or periosteal investment into which the ligamentous structures are inserted, sharing in the necrotic processes, break down and permit a luxation of the femoral condyles, its extent and direction depending on the situation and function of the detached ligaments. The synovial membrane seldom completely escapes when the tubercular process is well established. Now, the changes here noted during the varying stages and phases of this painful disease, are of infinite importance to notice; because by an intelligent comprehension of them we may be the better able to interpret their significance and check their progress.

It is apparent that the knee-joint is a passive agent. That it is largely made up—except the osseous parts—of non-vascular structures, as the tendons, cartilages and ligaments,—hence, one would assume that microbic action would be rapid and destructive in a part so defective in vascularity. Nevertheless, the contrary is the fact, for nothing can be more vascular than the lung, yet within its parenchyma tubercle works its greatest havoc. On the contrary, as a general rule, degenerative changes within the capsule of the knee advance slowly, as do those of a regenerative character, after the disease has spent itself.

The synovial membrane is commonly the favorite seat of incipient, tubercular infection. Being a serous membrane, it is highly vascular and molecular changes in the interstices of the lymph follicles are rapid and marked. Invariably, when it is occupied by inflammatory changes, these are transmitted through it by the absorbents to the superjacent structures.

The effusion in tubercular synovial inflammation, primarily, is purely serous, may undergo various mutations: purulent, gelatinous, fungoid, caseous or calcareous, the various phases of disorganization being associated with certain well-known clinical peculiarities. The more common termination of synovial effusion is the absorption of the primary secretion, or final disintegration, fatty softening, liquefaction and ultimate absorption of the residue. When, after synovial effusion, purulent or puruloid changes set in by the pressure of the contained acrid, irritating quality of it, granular, surface changes begin in the serous layer of the capsules, which by hyperplasia and interstitial infiltration develop into large, irregular shaped fungosities, which may stuff up the synovial space after all liquid effusion has disappeared.

The bone lesions are the most serious of all in knee-joint diseases; for, with the entire escape of the osseous structures in this malady, a useful limb may yet be preserved and the case is not apt to pursue such a chronic course.

The marked disproportion between the joint and the limbs above and below is more apparent than real; for, with inaction, the limbs quickly waste, while the swelling at the seat of morbid change remains, the contrast becomes all the more striking.

White Swelling.—The genuine tubercular osteo-arthritis, or synovitis, is a disease of great chronicity and usually passes through many painful stages before its course is arrested. In children it is a self-limited disease and will usually, in time, undergo spontaneous arrest, provided the powers of life can resist it until its march has ceased. I believe it very rarely ends in the loss of life, and that those who have been the victims of tubercular osteo-arthritis in early life, after adult years are attained, are mostly hardy, vigorous and energetic.

In the knee as in the hip or other joints, we may meet with every phase of tubercular infection, and we may find one or many of the structural elements of the articulation singly or simultaneously attacked. The disease becomes serious in the knee-joint only when the cancellous ends of the bones become affected and the disease extends beyond the capsule, involving the periosteum. This is not a common event, as the microbes of this malady manifest most frequently a preference for the periosteum or the non-vascular structures, as the cartilage and ligaments.

In the primary stages of tubercular arthritis at the knee, beyond certain vague symptoms, we have little definite evidence of the precise organic changes within the capsule until synovitis is present, and the periarticular elements exhibit evidences of pathological changes.

ANKLE-JOINT DISEASES.

This articulation in many respects bears a striking anatomical resemblance to the knee. Its articulating surface is very superficial, and like that above, is powerfully supported by numerous tendons. Its ligamentous supports, though numerous, are subordinate to muscular action through the medium of their tendinous termini. This is well demonstrated in talipes. This joint not only supports one-half of the body in standing, but it also must bear the body's entire weight. Yet, notwithstanding the constant jars, concussion and strains which it must endure, it is less vulnerable to pathological processes than the two other articulations considered.

The malleoli which wall it in laterally being mainly composed of dense, compact tissue, are seldom seized upon by tubercular infection. Where we do find this pathological process invade this joint, it will usually occupy the synovial membrane, cancellous head of the astragalus and extend downward into other tarsal bones.

When a serious phase of strumous disease is lodged in this articulation, we will find the foot extended on the leg, with the integument and cellular membrane of the former swollen and œdematous. The pathological changes in this situation in bone, synovial membrane or cartilage are essentially the same as those located in other joints.

TREATMENT.

The treatment of diseases of the three principal articulations of the lower extremities may be divided into constitutional and local, tentative and radical; all being dealt with on essentially the same principles.

Constitutional remedies will be resorted to when the pathological changes appear to have arisen from certain specific morbid influences, as gout, rheumatism, syphilis, malaria, gonorrhœa, or neuralgia.

That arthritis may arise from morbid conditions of the economy no one can question; nor will anyone deny that when this cardinal fact is understood, relief may not only be promptly effected, but simple measures may be instituted with a view to prevention. A failure to recognize the frequent constitutional or specific ætiological factors often operating in joint maladies may terminate disastrously to the patient whose condition, in consequence of misdirected therapeutic efforts, has not only not been relieved, but perchance greatly aggravated; and a temporary, trivial, functional affection has been made the groundwork of a condition sure to end in leaving the patient a cripple. Accordingly, in all cases of joint diseases of an acute origin, particularly, we must first search for systemic influences, malaria, rheumatism, or hereditary syphilis. The clinical symptoms of each of these maladies are usually quite clear and distinct, though they may blend with each other or others in many particulars, but so vague and imperfectly defined as to render little aid in diagnosis. When, then, we have reasonable grounds for suspecting that inflammation in, over, above, or below the immediate arthritic area is of a systemic origin, the patient should be kept in bed or on a lounge in the house, at any rate, and internal remedies plied with care and persistence until we are quite certain of the true character of the local changes.

At the hip-joint, mistakes will be most often committed. In the congestive or inflammatory conditions occurring at the hip of the group here defined, in association with

internal remedies, local applications will serve useful purposes.

There unquestionably is a large number of joint affections of an hysterical, cerebral, or psychological origin. The subjects of this neurotic class are usually anæmic, badly nourished, and have frequent moody, morose spells. Hence, morbid, molecular changes within the skull, in the brain substance, it is fair to assume, may, by reflex irritation, make themselves manifest in some distant region of the body.

From the obscure character of many painful affections in certain groups of muscles acting on joints and often exclusively limited to an articulation itself, in which, although severe pain and an infirmity obtains, yet there is no constitutional disturbance, no local, perceptible, tangible, morbid changes at the root of the trouble, so that they are very probably of a cerebral origin. There are two fundamental essentials necessary in the successful management of this group. To begin with, the patient's full confidence must be secured, or all our efforts are futile. You must make an impression. Sometimes this impression may be mental, again physical. It may be pleasant or painful. Hence, some of those crippled have been limbered out by an injury, a fall, or a violent concussion of the body, by a great fright, by sudden emotional effects, as surprise or joy. Hypnotism, mesmerism, and other occult phenomena have been successively invoked in these cases with varying results. No hard and fast lines can be laid down for the management of those arthritic neuroses. The greatest difficulty often consists in recognizing their true character.

The treatment of tubercular diseases of the joints and their over-lying parts has, since the dawn of medical science, seriously occupied the minds of practitioners. Its clinical features have been profoundly studied and thoroughly comprehended for ages. It was well known to commonly develop in connection with a well marked, constitutional cachexia, to pursue a very chronic course, and, finally, cease spontaneously after passing through some of its many various stages. It was not known, however, that its pathological basis was identical with tubercular meningitis of infancy and childhood, and pulmonary tuberculosis in the adult; that the germ of one was common to all.

Many teachers who had heretofore loudly proclaimed the invariable, traumatic origin of joint diseases *have been* suddenly silenced by the advent of the new doctrine. Sanguine, indeed, were all that at last the mystery was solved; and henceforth the management of this class of cases, conducted on strictly scientific principles, must always lead to no other than prompt and permanent cures. So that, almost at once, the moderate conservatism of the past was replaced on an extensive scale by radical and sanguinary methods. Joints were ruthlessly opened, scraped or wholly swept away by the blade and saw. Time was taken by the forelock and a local, tubercular lesion in the articulation of the child was as effectually eradicated in as many weeks as it heretofore was in years. Time, which is a great leveller, has, however, demonstrated that there is not so much in the bacterial theory as was first hoped; that it has been an *ignis fatuus*, the flash of whose light may often be better ignored.

It was discovered that those microscopical mites may lie dormant in the tissues for years; that at their worst they have but a life limit, or may be, in morbid processes, more rapidly devoured by the phagocytes than they can multiply. Those larger incisions and extensive resections, too, have been followed by a fresh infection at the seat of the operation, and even when this is not the case, so much shortening or deformity may result as to have the patient many times much worse than if nothing at all were done for him. Besides, there is a large element of danger in their performance, and the melancholy end, of not a few, has been a consecutive amputation or death.

Accordingly, we are practically driven back to the old lines and hence, as a matter of stern truth, the cardinal features of the underlying principles as promulgated in the early part of the present century by the great masters of the surgical art, must constitute our chief guidance in the treatment of those maladies to-day.

There can be but little doubt that in many instances the tubercular foci are limited to the soft parts outside the capsule and primarily involve neither the head of the femur nor the cotyloid-cavity. In these situations the infections may undergo spontaneous subsidence or advance to suppuration and cease. It is only when we are assured by the history of the case and the physical signs present that the bony floor of the acetabulum or the articulating head of the femur is involved by tubercular osteitis or osteo-arthritis that we are quite certain of the presence of a malady whose course is usually tedious, painful and destructive.

Now, what shall the treatment be in cases of osseous tuberculosis? Should it be mechanical or constitutional, or both? In mild

cases bodily rest, or rest in bed, and means to combat local inflammatory processes should be employed. Unless there be great intra-articular pain relieved only by traction, then no sort of extension should be employed, as a few weeks or a month's rest in bed may in itself suffice. In very serious cases of tubercular osteo-arthritis, not only good judgment is necessary, but skill and experience. Here, a knotty question of treatment arises, for our patient has a chronic affliction, and the measures instituted for his relief should be directed, not only with a view of effecting temporary relief, but for the purpose of securing as much functional utility and as little deformity in the limb as possible.

A recent writer[1] in an able brochure, asks the pertinent question: "When shall we discontinue mechanical treatment, in cases of hip-joint diseases?"

I would modify it by inquiring; "When should we commence the employment of mechanical means, in hip-joint diseases?" Should we employ any sort of apparatus at the outset? Certainly not! My own experience leads me to believe that orthopædic appliances at the present time are too frequently and indiscriminately resorted to, and that by this abuse much harm is being done. The best that any sort of apparatus can do is to prevent motion of the joint. But the complete and prolonged arrest of motion in the articulation of a child means temporary cessation of growth of the limb. No sort of mechanical adjustment will effectually secure complete fixation of a limb without considerable pressure of the soft parts and of the main blood vessels. Hence, mechanical appliances should not always be resorted to in the early stage of disease at the hip, nor ever, except by those skilled in their use. Should they here be employed as a prophylactic measure? I believe that only in very exceptional cases do they serve as an effective preventive; and that where they have appeared to have served the purpose the disease was not of a serious character. Orthopædic appliances serve an invaluable purpose as a means to early locomotion in chronic cases, but if they are worn too long, or are improperly adjusted, the patient, without question, would recover with a much better limb if none whatever had been employed. The firm, smoothly applied spica bandage, serves a valuable purpose in the early stages of hip-disease. Free leeching, the actual cautery and vesicants, each serve a most useful purpose in given cases, both to relieve pain and moderate inflammation and by stimulating the absorbents. When the head of the bone or the annular rim of the cotyloid-cavity has been destroyed by necrosis and serves to perpetuate an exhaustive suppuration it must be freely removed; great care, however, being observed to preserve the periosteum and the muscular attachments. In superficial necrosis with no serious local or constitutional disturbances, we may safely rely on the economy in either wholly detaching or dispersing the residue by absorption.

The hip is often traumatized, particularly in boys, by blows, kicks, falls, or twists of the leg. I believe that a traumatism may be an active factor in causing *morbus coxarius* proper. But, it is probable that it is very rarely so; for there are very few country-bred boys who do not often injure their hips by falls, yet, with the most intractable of them, this disease is very rare. One must be guarded, nevertheless, in prognosis, and watch the case diligently, if of traumatic origin, before applying any sort of mechanical contrivance. Swelling, sensitiveness and distortion often rapidly follow a severe contusion, or sprains at the hip: and if their true character be not recognized early, it may be confounded with serious intra-articular trouble, and be treated on wrong principles. This is the class of cases, *par excellence*, in which immediate, permanent fixation by any sort of plastic material, or other mechanical contrivance may be followed by unfortunate results.

It is clear then, that while rest of the injured part is a fundamental essential, it should be of a temporary and intermittent description; in other words it must be physiological and not mechanical. Indeed, so serious are the consequences of protracted fixation to the ultimate functional utility and strength of the growing limb, that the cases demanding its employment must always be of a grave and threatening character.

For myself, in a general way, in these pathological conditions, traumatic or otherwise, I think the safest course to pursue, is to be content with keeping the patient quiet in bed in the beginning, and if in doubt await events.

This may seem a reprehensible course, for it may be claimed that valuable time is lost when mechanical treatment might alone have arrested the morbid action in its incipiency. But, in traumatism of the hip, not involving dislocation or fracture, everyone, I think, will admit that rest and simple remedies will suffice, while, if tubercular, interstitial infection is the trouble, a short delay in the adoption of orthopædic appliances can work no evil.

[1] Dr. N. M. Schaffer, *N. Y. Med. Jour.*, *Nov.* 13, '91.

The treatment of disease at the knee-joint is to be managed on essentially the same principles as that of the hip, but as this articulation has very large articular surfaces and is very superficial, radical measures have been, and are still resorted to, for the relief of its deformities and diseases. Heretofore, the practice most in vogue, was, to depend on local and constitutional remedies, mechanical appliances, and time. Results occurring from this line of treatment varied from partial or complete restoration of function, to anchylosis, or amputation. Latterly, however, acting on the assumption that tubercular foci in this situation may give rise by diffusion to constitutional infection, and, besides, taking advantage of the security against consecutive inflammation and suppuration which modern surgical methods offer, the synovial-membrane has been freely opened for divers purposes, and not infrequently the whole articulation swept away by resection. It has been amply demonstrated, however, that the invasion of vital organs is not necessarily seriously threatened by a local tubercular action. The incision of the capsule for the relief of great tension, moderate erosion and drainage, is, in my mind, a substantial improvement. However, they are but palliative measures which must be employed under pressing circumstances, and even then, only when every possible precaution has been taken against extraneous taint.

The great controversy has been on resection of the joint. Why carry a patient over months or years of suffering, and be content, perchance, with nothing better than anchylosis and deformity, when the malady may be cut short and the distortion obviated by radical surgical intervention?

On superficial examination this question would seem unanswerable, but when we submit the subject to the rigorous scrutiny we discover that the consequences following resection are often unsatisfactory, or worse; that it cannot be regarded as a cure of joint disease, for the simple reason that it leaves no joint to cure. And further, in growing children, that class in which it promised the best results, its application is most unfortunate on the growth and usefulness of the limb.

A resection of the knee-joint means practically its total destruction, *i. e.* the whole of the synovial membrane, the patella, the ligaments, the articular surfaces of the condyles, and head of the tibia are cut away in order that the sawn surfaces of the bones may be brought together and secured. Now what becomes of the immense hiatus remaining after the complete extirpation of all the cartilage, the ligaments, and osseous structures of the joint? Certainly a large gap remains. It is filled in with practically nothing if we exclude a thin layer of connective tissue and usually sufficient osseous substance to cement the divided ends of the bones together. There is, then, indispensably connected with resection, shortening, which proportionally increases with the rising and maturity of the body. But this is not all, the muscular fasciculi of all the hamstrings and those of the quadriceps extensors reduced for all time to a state of inaction, atrophy and degenerate, so that there follows a great diminution in the volume and strength of the thigh.

The substitute remaining for that once powerful, mobile joint is practically nothing but the glued-together ends of bone and an investment of integument.

An angular deformity, however, has perhaps been removed. True, but a perpetually straight lower limb is abnormal, as the leg is almost never long retained fully extended on the knee except in the standing attitude. Besides for purposes of utility and strength the flexed limb is by all odds much more serviceable than one anchylosed in the extended position.

When, nevertheless, there has been extensive destruction of the ends of the bones, the ligaments have given way, and the cartilages are broken down, the propriety of a resection then—if we may so designate the complete clearing away of necrotic structures—is an open question.

When these destructive changes have been consummated, one may hesitate between leaving the leg intact and favor fusion of what remains of the condyles and the head of the tibia, or an amputation. My own opinion is that the leg should be spared if possible, and the weakness at the seat of the knee-joint compensated for by a mechanical support.

During the past five years or more many European surgeons have been treating tubercular affections of the lower joints by intra-articular and interstitial injections of solutions of the various inorganic salts, hoping to secure by their action the destruction and absorption of the bacilli. Many cases have come under my observation recently, in which these injections have been employed. No doubt, when proper precautions are observed, this method in properly selected cases serves an important purpose, but we should be careful that in certain cases those pungent liquids do not light up an active and uncontrollable inflammation, and thus greatly aggravate a

case which was possibly making slow, but steady progress towards recovery.

At the ankle-joint tubercular infection is not of so frequent occurrence as in the hip and knee, though, when it does attack this articulation, its progress may be of an alarming rapidity. I have had a case under observation in which, from the first manifestation of osteo-arthritis at the ankle to the complete disorganization of the bony structures scarcely five weeks elapsed. The ankle-joint, like the knee, having no muscular investment is quite superficial for direct surgical treatment, but as with the former, orthopœdic appliances should always be resorted to in treatment rather than surgical intervention by sanguinary methods; for a solidly anchylosed ankle-joint may serve a most useful purpose throughout life, with little, if any impediment to locomotion, or apparent deformity. In this situation where the main tarsal supports have broken down by interstitial necrosis, and no active efforts at compensatory regeneration in their periosteal envelopes are evident, then an amputation is imperative; for without the astragalus and os calcis the remaining parts will be a source of misery and a useless appendage.

ANCHYLOSIS.

Moderate and complete, false or true anchylosis is one of the sequelæ which may result in varying degrees after injuries or diseases which involve the muscle bones and joints and restrict their free action. Our efforts should, in all cases in which this is feared, be first directed towards preventing permanent stiffness. This can best be accomplished by massage, early motion and bandage pressure.

Anchylosis is the *bête noir* of immobilization. How to preserve quiet in a diseased joint for a great length of time without seriously impairing or destroying its utility is a difficult problem. The mere fact that protracted fixation of an articulation induces no destructive, pathological changes in the joint itself, is no proof of its immunity, for in many of the most hopeless cases of anchylosis of the knee which have come under my observation, are those in which the sole difficulty was confined to the muscles, muscular sheaths, tendons and nerves, far away from the crippled hinge.

After traumatisms and moderate attacks of non-articular or muscular rheumatism, neuralgia or other vascular or neural affections, giving rise to pain and a tendency to keep the limb in a fixed position, an anchylosis may follow, which if its true, pathological character is not realized early, serious detriment may accrue to the functional use of the limb, or appliances may be adjusted which are rather responsible for the condition than the injury or malady itself. Hence, the vital importance in affections of every description which involve joints, whatever may be their nature, of instituting such exercise or motion as is compatible with physiological rest, with a view of preventing, (or if stiffness must result) of limiting its degree as far as possible.

Anchylosis is occasionally amenable to treatment according to its nature. For bony anchylosis, in which there is complete fusion and solid ossification of the articular surfaces, nothing can be done. Though, of late years, articulations have been resected with varying degrees of success. This, however, is not restoring motion in the joint, as the latter has been sacrificed. Muscular anchylosis, when fibrous changes have occurred in the fasciculi, and throughout the entire planes of the muscle and they are bound together, contracted and atrophied, is as irremediable and always more unfortunate than osseous. There is a species of limitation of action in a joint that might frequently be obviated altogether.

False anchylosis, so-called, is always more or less readily remediable. It frequently follows injuries and transient inflammation in or about the joints. If neglected, it may result in a permanent crippling of the limb. Judiciously applied force usually overcomes it, though here as in other species of anchylosis, one must proceed with great prudence in order to avoid injury to the nerves or blood vessels, or fracture of the bones. Frequently tenotomy or division subcutaneously of adventitious bands is a most valuable accessory in many cases.

Surgical history notes that singular class which moderns have designated phychological —those hypochondrical, hysterical, anæmic young women who have painful, tender joints which became so without any apparent cause. We find no evidence of organic change in the articulation. Medicines and topical applications have no effect and the crippled state remains. But a mental or physical impression is suddenly made, she throws aside her crutches and walks away cured. These are the cases in which the old-fashioned bone-setters would always have it that "the bone was out," and in which, by the abrupt and violent application of a twist and squeeze, torturing pain is for the moment inflicted; the patient recovered from the sudden shock, she was quite confounded to find

herself cured. With this class of joint maladies no anæsthetic should be employed. The practitioner, after having carefully examined his case, must speak with a confident assurance. When he takes the limb in hand, he will find that there is commonly a certain group of muscles hyperæsthetic, which, on any movement of the joint, gives rise to great pain. A firm, sudden and compound motion must be made, when we will usually feel adhesions give way under the hand as force is applied. I never put on any sort of dressing after the manipulation, but simply tell them that the more they exercise the joint the more thorough and permanent will be the cure.

Much might be said of the pathological changes which are mainly confined to the neighboring bursæ, the tendon insertion, the thecal envelopes, the medullary spaces and periosteal tissues, adjacent to and essential constituents of the articulations: but the object herein undertaken has been to call attention to and re-awaken interest in the study of the articular affections in the lower extremity so common in early childhood without any attempt at an analytical *résumé* of the latest notions of microscopical pathologists with regard to their minute elements.

CONCLUSIONS.

It may be said then in a general way that the maladies at the hip, knee and ankle joints in early childhood are functional and organic, intra- and extra-articular; that tubercular affections of the synovial membrane, the arthritic elements and the heads of the bone though sometimes tedious in their progress are self-limited. In their milder forms requiring little, if any, mechanical fixation of the affected joint. The premature adaptation of any sort of orthopædic appliance may result in serious ultimate consequences to the utility and strength of a limb; for enervation atrophy, contracture and fatty degeneration of muscle, always follow the long-continued, forced inaction, and absolute arrest of motion in an articulation.

Mechanical apparatuses when applied at the right time, judiciously selected and skillfully adjusted, are of infinite value; but when these conditions are not faithfully complied with, then the patient's chances are much better without them.

There is yet good ground for very strong and emphatic objection against resection of the knee-joint; for the total mechanical destruction of a joint is not a cure in any sense; hence, it can be justified only when disease has so far disorganized the osseous and osteochondral structures that amputation becomes necessary, as an anchylosed knee-joint is a hundred-fold more serviceable through life than no joint at all.

Caution must be always observed that functional is not confounded with organic or extra-articular joint diseases, as early fixation employed extension of a given limb arrests its growth. Besides, with moderate articular motion and muscular movement, full restoration will be much more rapidly attained than by any sort of mechanical therapy.

In recent extra-articular anchylosis, in order to derive the most prompt and permanent benefit from the liberation of the adhesions, the force should be cautiously but suddenly applied *without* an anæsthetic.

The term "hip-joint disease" should be rejected from surgical nomenclature as a term too vague and misleading. Maladies at the hip should have a classification based on precise and distinct pathological changes. By abiding this antiquated term there can be no doubt that not infrequently for a trivial inflammatory state of the soft parts, measures have at times been instituted intended for dealing with the more serious intra-articular disease.

Finally, in each and all of those pathological conditions at the hip, whatever be their extent, we should not lose sight of the cardinal fact that they all arise either from unsanitary surroundings, improper dieting, inheritance or malnutrition; hence, the root of these maladies must be reached by hygienic changes, proper food, freedom and the open air, and such medicines as will best combat inherited tendencies and favor the assimilation of a nutritous diet.

It will be noted here, that in the category of remedies for joint lesions nothing more than an indirect reference has been made to antiseptics. Antiseptics, except for purposes of purification of a sore or a wound in a joint, though they promised much, have been disappointing and serve scarcely any purpose in the treatment of affections here considered. —(For discussion see Society Reports, p. 341).

CARDIAC DROPSY.

Dr. Furbringer (*Il Raccoglitore Medico*, No. 15, 1891) uses the following:

℞

Infus. folior. digitalis (2 p.)	grammes	150.
Caffein. citrat.	"	2.
Tinct. strophanth.	"	5.
Liquor potass. acetat.	"	60.
Succ. glycorrhizæ	"	5.

Sufficient for two days.

It may be pushed until the diuresis rises to 5 quarts a day.

THE TREATMENT OF DIARRHŒA IN CHILDREN.*

By DR. FLORAND,
PARIS, FRANCE.

It is not my intention to discuss the arduous and difficult question of infantile diarrhœa, nor do I propose to give any classification. I simply wish to consider the treatment of the disease *apropos* of five cases which I have observed recently. I will call attention to the treatment which seems to me the most proper to employ in certain cases of diarrhœa in children. One of the observations was a case of choleriform enteritis; the remaining four may be classed among the true diarrhœas, or better perhaps among the infectious gastro-enteritis occurring during the weaning period. Two of these cases I studied with Dr. Hutinel, to whom I first showed the especial method of treatment which I am about to relate. The other three were purely personal observations.

This treatment, first put into practice in Germany and communicated to us by Professor Grancher, has been used recently by Hutinel, by Dr. Sevestre at L'Hopital Trousseau and by me at L'Hopital des Enfants. We shall see what the results have been at the hospital, and study the reasons why such results have differed from those seen in private practice.

Case I.—X——, 15 months old; nourished at the breast; was weaned at the eleventh month, and afterwards fed, for about fifteen days, on milk, farinaceous articles, eggs and vegetable soup. The appearance of eight teeth was attended with no trouble whatever. On the 27th of September the child was attacked with diarrhœa, which the mother attributed to the cutting of the two upper molars.

I saw the child for the first time on the 2d of October. The diarrhœa was exceedingly marked; the stools were abundant, fetid, a little glairy, of a slight greenish color and of a decided grumous appearance. I advised the exclusive use of milk, and the employment of a mixture composed of salicylate of bismuth, lactic acid and paregoric. I again saw the child on the midnight of the 3d of November with Dr. Marcy. The little patient had had since the day previous twelve or fifteen stools, accompanied with vomiting. The passages were exceedingly fetid, and consisted of undigested milk and a large amount of liquid.

The child continued to suffer at intervals; his mouth was a little dry, and the rectal temperature 39° C. Enema with laudanum diminished neither the diarrhœa nor the pain, until a mixture of bismuth was ordered.

The child was placed on a limited diet on the 4th of October. On the 5th vomiting ceased, but the diarrhœa and the swelling of the abdomen continued. The little patient was restless, excited and peevish.

On the 6th there was a slight amelioration and the child was given some teaspoonfuls of broth. By evening the diarrhœa, the swelling of the abdomen, the pains and the general excitement returned.

On the 7th a consultation was held with Dr. Hutinel. The temperature of the patient was 39.5° C., pulse 130. The abdomen was much swollen; the tongue very dry, and the thirst intense. The child had had five stools of a dark, greenish color and fetid, and had not urinated. The skin was dry, and the child was so emaciated and weak that he could hardly support his own head. He constantly gave evidences of pain, which was pronounced at the moment of going to stool. All the other organs were apparently intact. Dr. Hutinel advised an absolute liquid diet (albuminous water and iced grog), a bath at 34° C., four centigrammes of calomel to be administered in the course of four hours, and washing out of the stomach if the symptoms persisted.

The night being passed by the patient in a restless manner, and the tympanic condition of the abdomen continuing, two glasses of hot water were ingested into the stomach. On the morning of the 8th of October this procedure was repeated with the aid of a gum sound, No. 13, provided with a funnel. After the operation, which was performed without the least difficulty, the child rejected a flocculent, slightly brownish and grumous liquid. After the washing, calomel was administered in the same doses as on the previous day. For the first time in six days the child slept that afternoon for seven consecutive hours.

In the evening the patient was less restless, but complained a great deal. A second washing was instituted on the next morning and this was followed by a calm sleep of six hours.

On the previous day, after the washing of the stomach as described, the child had only two greenish stools, but these were thick. The patient also suffered evidently from bad dreams. On the 9th of November the bowels were moved in the evening by means of an enema.

On the tenth the child appeared exceedingly calm, had passed a good night, his tongue was less dry, his belly less swollen and less painful, his skin moist, and had urinated abundantly. His stools were greenish and but slightly fetid. The child was given three drops of hydrochloric acid in sixty grammes of grog. On the following days the bowels had to be moved by means of enemata.

From the eleventh day alimentation was administered with great caution; 250 grammes of ass's milk in twenty-four hours was well tolerated, after four days of an absolute liquid diet. From the 14th the child was nourished with sterilized milk. Without any other untoward symptoms our little patient recovered with extreme rapidity.

Case II.—Andre X., 22 months old; nourished primarily at the breast. After the age of nine months he was given milk, and after the twelfth month, eggs, bread and vegetable soups added to the milk. The child had sixteen teeth and suffered relapses of sickness dependent upon the period of lactation, and afterwards from slight troubles of digestion, fetid diarrhœa and vomiting, all of which symptoms yielded rapidly to a light diet and a light purgative.

* From *La Medicine Moderne.*

These symptoms again appeared after eight days with such tenacity that they resisted all treatment, notwithstanding the observance of a strict diet. The child grew thin and weak; his thirst became pronounced and his tongue somewhat dry.

I decided on the 13th of November to wash out the stomach, which I did with Vichy water, following this by the administration of five centigrammes of calomel in doses of centigramme every hour.

The liquid diet was maintained until the 15th. The vomiting and the fetid diarrhœa ceased on the 14th. The alimentation, consisting of broth, and afterwards of soup, was resumed.

On the 22d of November, the child was placed on his old habitual diet. The troubles of digestion did not reappear and the child made a rapid recovery.

CASE III.—John ——, aged 9 months; was from birth nourished by a mixed diet consisting of the mother's milk and carefully boiled cow's milk. On the 17th of October, he was attacked with symptoms of a choleriform enteritis; vomiting and abundant diarrhœa, which were increased with the ingestion of food. The stools were fetid and made up chiefly of undigested milk and a flocculent, clear liquid.

The urine was scanty, almost wanting. The child manifested a worn-out appearance, was greatly emaciated, notwithstanding that the diarrhœa had been only of a forty-eight hours' duration. The eyes were sunken and there was a pinched expression of the face. His extremities were cold, and his rectal temperature was only 38.8° C.

I ordered all alimentation to be stopped, and I then gave three centigrammes of calomel and grog.

The symptoms persisted. I then, on the 18th, washed out the stomach with hot water, using a No. 8 sound, and readministered the calomel.

Vomiting ceased, and from sixteen and twelve daily stools which the child had on the two previous days, the number was reduced to four. The little patient passed a bad night; so I again washed out the stomach on the following morning.

The exclusive alimentation with the mother's milk was cautiously resumed on the same day, and five days afterwards the child was placed on the old mixed diet, substituting the boiled with sterilized milk. No bad symptoms returned.

CASE IV.—Jeanette X——, 6 weeks old; weighed at birth, 3700 kilos; was subsequently afflicted with imperfect nourishment. Her digestion was bad and laborious. She rejected the milk soon after she was taken from the breast; yawned frequently, and would cry without apparent cause. She had alternations of increase and diminution of bodily weight, and on the 6th of December, that is six weeks after birth, she had only gained 400 grammes. Her third nurse seemed to be in the best condition as to health, yet the child began to have every day from five to six stools of a greenish color, or turning green soon after their expulsion. They consisted chiefly of undigested milk.

The symptoms were somewhat ameliorated by the use of lime water, by Vichy water and by lactic acid; but as the child did not gain much in weight, and as the stools became frequent, sometimes of a green color, and causing by their presence an erythematous eruption about the buttocks, I advised the parents to let me wash out the stomach of the child. The operation was executed with comparative ease, and through a No. 8 sound I introduced a half-glassful of hot water.

The procedure was followed by the administration of two centigrammes of calomel in three doses.

The alimentation was continued with no other modification than a slightly prolonged interval between the sucklings.

After this operation the stools became regular (two a day). They were but slightly liquid and the greenish coloration of them was only seen two or three times and only once during the day.

CASE V.—Louise F——, 30 months old; was nourished at the breast by not a very good nurse. Her digestion has been imperfect, and during the suckling period she suffered from attacks of diarrhœa. Her alimentation has been attended to with a good deal of care by her own father, who is himself a physician and a keen observer. For a long time the child has been placed upon a diet of boiled milk, to which were added a little soup, lactated flour and eggs. On the appearance of every period of dentition, she was troubled with marked troubles of digestion. The appetite at present is capricious, and alimentation sometimes is by no means an easy task.

On the 2d of November, on the rupture of the small molar teeth, the child exhibited a marked loss of appetite, followed by a fetid diarrhœa; and on the 8th of the same month, the diarrhœa was accompanied with vomiting, likewise fetid. The child had meteorism, the abdomen being slightly painful on pressure. She was much depressed, notwithstanding that there was a slight rise of temperature. Her extremities were cold, and after a few days she became much emaciated.

The fetid vomiting and diarrhœa continued during the 9th and 10th. The abdomen was somewhat swollen. The general condition was worse. Dr. Hutinel saw the child on the evening of the 10th, and advised a washing out of the stomach, to be followed by the ingestion of three centigrammes of calomel and a liquid diet (albuminous water and grog).

I practiced the stomach washing the same evening. It gave rise to the rejection of a large quantity of extremely fetid matters (milk and lactated flour), and I found it necessary to repeat the operation several times in order to completely clean out the stomach. During the procedure the child had also a fetid stool. There was a condition of amelioration during that evening and on the day of the 11th, when the child ceased to vomit and her abdomen became less tympanitic. On the night of the 12th, the little patient became worse again and was restless and peevish. She asked frequently for drink. Her abdomen became swollen and somewhat painful.

On the morning of the 12th, I gave my little patient a new dose of calomel. She had three green stools, somewhat glairy and still fetid. One of these had some bloody shreds. On the advice of Dr. Hutinel, I practiced during the day a second washing out of the stomach. The water ejected was slightly foul, somewhat flocculent and contained some brownish shreds. Part of the hot water remained in the stomach. On the 13th, the child appeared better, did not vomit and had no stools. She was given a few mouthfuls of broth. In the evening the meteoric condition of the stomach returned and the child became restless. I again administered two centigrammes of calomel, and the child was once more placed on absolute liquid diet.

It was afterwards necessary to produce movements of the bowels by means of enemata. Alimen-

tation was resumed with extreme caution, administering small quantities of raw meat well chopped up and afterwards broth and sterilized milk.

In about eight or ten days the patient resumed her old diet. The child, during the first days of convalescence, exhibited a voracious appetite. This intense hunger soon ceased and was replaced by an appetite less pronounced, but better than had been manifested by the child since her weaning. It was, indeed, sufficient to rapidly restore the lost energies, and principally the considerable weakness produced by this sort of infectious gastro-enteritis difficult to classify.

These five observations present such a peculiar interest that they need some consideration. Every child attacked by diarrhœa during the weaning period, due to a faulty nutrition, the diarrhœa being accompanied or not by vomiting, should have the benefit of stomach-washing and be subjected, at the same time, to the internal use of calomel and a diet of albuminous water and grog. The washing out of the stomach may be practised twice or oftener, according to the case, with hot water or Vichy water. The intestines should also be cleansed out by means of enemata of hot water slightly borated, especially if the evacuations are insufficient. The child must be kept in warm media, the feet well wrapped up and the abdomen well padded. If the temperature is elevated a warm mustard bath, at 32° C., is useful. If there is pronounced tympanites a poultice should be ordered to be carried over the abdomen.

The tympanites, the pains, the vomiting and the diarrhœa, whether they co-exist or one or the other phenomenon should come on separately, are all indications for the employment of the stomach-washings, the internal administration of calomel, and the subjection of the patient to the diet indicated.

After the disappearance of the symptoms, alimentation should be resumed with the greatest care. This should consist either of ass's milk, broth deprived of all fat, and small quantities of sterilized milk. If these measures should fail, the ingestion of raw meat, according to the method of Trousseau, should be resorted to. If at the beginning of such alimentation there should appear green stools, a little lactic acid, or from four to five drops of hydrochloric acid, should be administered. The washing out of the stomach in children is easily practised. The younger the patient the more simple the operation. After placing a cork between the teeth or the gums of the child, as the case may be, a caoutchouc urethral sound, of a calibre proportionate to the age of the patient, and to which a funnel should be attached, is to be introduced into the stomach, the whole apparatus acting upon the principle of a syphon. The introduction of the sound generally presents no great difficulties, the operation being performed in the course of a few seconds. The sound being introduced, two glassfuls of hot water are to be ingested, this being soon followed by the expulsion of the stomachic contents. If the matters ejected have a foul odor, the operation is to be repeated twice or thrice; immediately after, the first dose of calomel, 1 to 2 centigrammes, is to be administered, which is followed by a second and a third dose, at intervals of one hour. Generally a single washing out is sufficient; two or three are sometimes necessary. Albuminous water and grog are to be given in tea-poonfuls every 5 to 20 minutes, according to the degree of the thirst and to the dryness of the mouth.

Most commonly, good results are immediate. The child soon after passes into a quiet sleep, the bodily temperature is lowered and the vomiting ceases. The evacuations, at first fetid, lose their bad odor and may even be suppressed. All the local and general phenomena are lessened or disappear entirely. The abdomen becomes less tympanitic and less painful. The restlessness and prostration are changed into a quiet condition of the system, and the reparation of the vital forces ensues through the effects of a refreshing sleep. The child begins to urinate.

The diet *per se* works wonders, and the little patient tolerates it for many days, provided it is composed of albuminous water and grog.

I may say that I have given, at the beginning of the disease, mixtures containing bismuth, paregoric and laudanum, which have sometimes attenuated the malady, but such medicaments have only acted as palliatives and were never sufficient to save the life of the little patient. It is unnecessary to recall the fact that diarrhœa in children has frequently a fatal termination. To be convinced of this it is sufficient to examine statistics of the terrible malady.

If the disease presents in hospital practice a greater mortality, this is evidently due to the fact that children are generally brought to the hospital in a weakened condition and are then subjected to a continuous re-infection. Besides, it is difficult to follow rigorously and carefully the treatment referred to. On the contrary, in children isolated and well taken care of in civil practice, the employment of this method of treatment is advantageous, as the results show in the cases reported, which cannot be considered as mere happy coincidents.

All these cases presented the most serious phenomena, and one of them was treated ac-

cording to other known therapeutic measures but without the least success. I hope, therefore, that new observations will permit me to study more fully the most precise indications for the treatment advocated, and to be able to give the reasons for the success obtained. Certain it is, that washing out the stomach removes from the organ all the toxic products which are contained in it and which are being constantly elaborated and absorbed in the intestines.

Calomel finishes the task, so to speak, begun by the stomach-washings, the action of that drug being antiseptic and purgative. It purifies and releases the intestines of irritating materials. Thus, by means of stomach-washings and the administration of calomel, a cleaned-out condition of the whole digestive tract, from the mouth to the anus, is brought about.

SCALDS AND BURNS.

By A. D. BINKERD, M. D.,
WEST MONTEREY, CLARION CO., PA.

"A burn is the most dangerous of all wounds," says the elder Gross.

Methinks I can still hear his finely modulated voice as he uttered this truism, and in my mind's eye still see his commanding figure and dignified manner while delivering his matchless didactic lectures in his palmy days, a quarter of a century ago, in the Old Jefferson. Like Abraham Lincoln, Dr. Gross, dead, still lives to challenge our respect, a worthy exemplar.

A burn may indeed be a most dangerous wound. Often has this fact been most sadly demonstrated. Whether a scald or a dry burn, the result may be equally dangerous. If one-fourth or one-third of the surface of the body be severely burned, we should make our prognosis with great caution. A mere hyperæmia of the skin extending over a considerable portion of the body, especially over the chest, may, and often does, result fatally within a few hours. When a severe chill convulses the form of your patient, be on your guard. It means mischief. I have seen acute pneumonitis destroy the life of a patient who had been apparently but slightly, and not at all dangerously, burned, death resulting within thirty-six hours. I have seen young men, in the prime and vigor of early manhood, walk unaided away from a wreck, talking hopefully of recovery from the effect of a steam bath or the hot water that had fallen upon them, become chill and cold in death within six hours. Truly, a burn is the most dangerous of all wounds.

A burn is also the most painful of all wounds. The skin is everywhere abundantly supplied with nerves; these coming in contact with a body having a temperature of 150° F. and upward, or 32° or less, assume an excessive irritation. The continuity of the skin being destroyed by a degree of heat much greater or much less than that to which the part has been long accustomed (for there is little difference between the effect of a burn and that of frost-bite) the nerves are despoiled of their integument, exposed to the air, disturbed in their functions, producing painful irritability. A small burn of sufficient intensity to produce vesication is often quite as painful as a deeper burn involving a considerable extent of surface. The resulting shock is probably much greater as a result of the greater burn.

The tendency to "run," and unwillingness to heal, have characterized a burn in all ages. The life of the patient has been not infrequently sacrificed by the constant drain upon the constitution resulting from death of the parts.

Pain and protracted suppuration are not the only evils arising from a burn. Danger to the usefulness of the parts after recovery, and unsightly cicatrices stand out boldly as important sequelæ to be avoided at all hazards or modified to the utmost degree. To accomplish this object is to be successful in the treatment of a burn.

A burn differs from an incised, contused, lacerated or punctured wound, being capable of imparting to the nervous system a more profound shock, which in some way modifies the career of the traumatism. Who does not remember the unsightly and unscientific pinning down of the chin upon the sternum, as the result of a severe burn involving these parts? With honest pride we can now state these things need not occur. The experience of twenty-five years has, over and over again, verified the statement.

It has fallen to the lot of the writer to meet a very large number of burns in the oil regions of Western Pennsylvania, from the close of the war down to the present time. These cases include every possible degree of severity—from the instantly fatal down through the long line of possible and probable recoveries. They include all ages and both sexes from the octogenarian to the babbling infant. I have seen the whole family annihilated—father, mother, and children, amid indescribable agony, but of very short duration. Everywhere and under all conditions

I have observed the effects of a burn to be the same. The treatment of burns now claims our attention.

We set out with the belief that a burn is a stubborn traumatism to deal with. In this particular we will probably not be disappointed. Having surveyed the extent and depth of the traumatism, and carefully marked the profundity of the shock upon the nervous system, observed closely the number and character of respirations and pulsations per minute, the presence or absence of thirst, also the tendency to chilliness (of the utmost pathognomonic value), you may now venture upon a prognosis. Here you will encounter the most vexatious disappointments. Suppose the burn is recent and of the extent of the palm of one or two hands, one-half the surface is in a state of hyperæmia, and from the other half the skin has come away in shreds with the garment. The wound is exceedingly painful. The patient can neither stand nor sit long enough to have any dressing applied. If the patient be an adult administer at once:

Morphia sulph.....grammes 0.033

Dress the wound with:

Glycerine.....cc. 30
Acid carbolic, fld.....cc. 3

Incorporate thoroughly.

Saturate portions of cotton batting; cover the wound entirely; also finish the dressing with a roller bandage, neatly applied, but not too tightly. Make ample allowance for possible swelling. Above all be neat and clean in handling a suppurating surface. Your patient will now quiet down and show a disposition to sleep. See that he is kept quiet and let him sleep. Towards morning he will complain of acute pain of the burned surface. Decomposition of lymph has set in, the presence of matter is painful. Remove and burn all the dressing. With a basin of clean warm water and a fine brush remove every particle of lymph. Dry the surface of the wound by firmly applying bits of clean old, worn, cotton garments. Blood pours out here and there, and an angry, rebellious condition obtains all over the wound. Incorporate one grain of morphia sulph. with 2 or 3 cc. of tannic acid, and sprinkle over the surface. Then dress again with the glycerine lotion, and finish with the roller bandage as before. And let remain 8 to 10 hours before dressing again. Water may be given freely. Copious drinking followed by vomiting till death closes the scene, which I have sometimes witnessed, is only another evidence of the fatality of the burn. This is rarely seen after the first day.

We have now entered on the third day. The pulse is small and wiry, secretion from the kidneys scant and high colored. Appetite *nil*, tongue furred, and a bad taste in the mouth. We remove the dressing, a stream of offensive smelling lymph streaked with blood flows down and drops off the elbow. You need not ask the patient how he feels. You need but look at him to know that he feels sore in person and irritable in temper. How should he be otherwise with all the secretory organs in a state of torpidity? Woe to the luckless doctor who will venture an untimely joke at seasons like these. But happy the man who like the elder Gross or the elder Flint will enter into the sympathies of the sufferer while endeavoring to relieve the agony of both body and mind and thus challenge both his respect and admiration. The bowels are now thoroughly evacuated by a few doses of sal Epsom, the secretions reestablished, the appetite is reasserting itself. The character of the wound has changed, the transudation is less profuse and more consistent. Granules are springing up and struggling for continued life, many to be washed away by the excess of lymph, a few to survive.

The glycerine lotion has served its purpose. It is no longer applicable. The character of the wound has changed; this necessitates a change of dressing, one that is both soothing and astringent. What shall it be?

The following most unhesitatingly:

℞

Cera flava.....cc. 60.
Ol. olivæ.....cc. 600.
Acid. tannic.....cc. 30.
Acid. carbolic.....cc. 5.
Bismuth subnitr.....cc. 10.

Melt and strain the wax, keep it hot in one vessel while you heat the oil in another, when both are equally hot, (90° C.), pour together and stir, let cool gradually and stir continuously to insure uniform consistency. When of the consistency of apple-butter, add the tannic acid, then the bismuth, and finally, the carbolic acid. Continue the stirring process till the whole is cold. This, when properly made is a plastic substance which may be taken up with the spatula or with the fingers. It makes a sightly dressing and is not sticky, but is easily applied and easily removed. None of that nauseating and offensive smell, so common in the days of lime water and oil, can be detected where this unguent properly prepared has once been used.

How to apply a dressing to a burn is not known by everybody, even when you have the most potent remedy for good. Mother-wit and plain common-sense must be largely

relied on here, as in reducing a fracture or subluxation.

It is now the evening of the third day, though the character of the wound is somewhat changed, the effusions of sanious lymph is profuse, and in its state of partial decomposition is vile-smelling and painful.

How to proceed to dress is the next question. Do not lock up the secretions again by giving an opiate.

With a basin of tepid water, a fine camel's hair brush and a piece of fine old Castile soap, I remove all matter of every character. Remove all shreds of skin carefully with dressing forceps and scissors. Cleanse away every nidus or lodgment for the ever vigilant microbe. Dry the entire surface with patent lint, then sprinkle the part thoroughly with tannic acid and bismuth sub nitrate, equal parts. Cut your patent lint into strips one inch wide and of lengths to suit, 2, 3 or 4 inches, rarely more. With your clean spatula, or limber table knife, cover evenly one of the bits of lint to the required thickness, rarely to exceed two millimetres. Hold to the fire till the dressing is soft and warm, then apply gently but firmly to the raw surface of the wound. This imparts an agreeable, soothing warmth to the part. Continue rapidly applying one strip after another till the whole is covered—not only the denuded parts, but also all the hyperæmic portion. Then apply gently, neatly, and not too firmly, a narrow roller bandage, with the reverse turn to adapt it uniformly to any irregularity of the part. To the art of bandaging neatly the surgeon is largely indebted for his success. And so will you be in the successful treatment of these wounds.

Though the patient may be feverish, restless and irritable, it has often seemed to me that some soothing influence crept over him while I was at work—long before I had finished the dressing, the patient was locked in profound sleep, equally ignorant as to when I finished the dressing or when I left the house. This has happened to me so often, and with such uniformly good results, that I can safely and cheerfully recommend my method with the means described as *the* treatment for a burn.

The critic may say, "There are opiates in your dressing." I beg his pardon. Not a grain. After the first hour or two opiates are not applicable, or rarely so.

On the fourth day I find my patient refreshed and cheerful. I remove the dressing and find the character of the traumatism still farther changed. The angry appearance of the day before has subsided. The discharge is less profuse and of thicker consistency, "laudable pus"—as the elder Gross was wont to say—bathed the parts, beneath which healthy granules were springing up everywhere. I cleanse the wound thoroughly, as before, and dress in the same manner and with the same material with the same result. A few weeks will suffice for the treatment of a very severe burn, while as many months under the old methods would leave the patient disfigured and probably disabled for life.

In conclusion: 1. I insist upon the observance of the utmost cleanliness, twice a day if necessary. Remove all shreds of skin and all lymph.

2. I insist on cutting the lint on which the ointment is spread into small bits to insure perfect adaptation of the dressing to the inequality of the surface.

3. Observe and enforce the strictest rules of hygiene. Give the patient plenty of good, wholesome and nutritious food, of which milk should constitute a large part.

The above is the sum and substance of a quarter of a century of practical experience.

A CASE OF OVARIAN CYSTOMA.

By ARCH DIXON, M, D.
HENDERSON, KY.

Mrs. G., aged twenty-nine, married, mother of four children, youngest child two years of age, had not felt well since her last delivery, which was long and tedious. One year ago she noticed an enlargement, low down on the right side, about the size of an orange. Was not examined by any physician at that time. Enlargement grew rapidly, causing much pain and discomfort. On June 10th, I was requested by her brother, Dr. Thos. Bethel, of Pooletown, Webster County, Ky., to do abdominal section, and if possible remove the growth, the character of which he had not determined. On June 14, saw the patient for the first time at Robards, Kentucky. Diagnosis, ovarian cystoma. She was anxious for an operation. Assisted by Drs. John Young Brown and Arch Dixon, Jr., I proceeded at once to open the abdomen. A large quantity of ascitic fluid surrounded the cyst, which was very large and attached by adhesions from pedicle to base on the left side. The adhesions were tough and strong. A previous tapping doubtlessly assisted in bringing this about. With as much caution as I could bring to bear the adhesions were broken up, bleeding points caught and ligated

with sterilized silk. At the extreme upper left side of the tumor a large piece of omentum had to be tied off and cut away. The pedicle, which was inserted close up to the uterus on the left side, was ligated in the usual way, Chinese twist being used. After emptying the tumor it was found impossible to deliver the sac without enlarging the abdominal opening, which was accordingly done, the incision extending three inches above the umbilicus. After removing the tumor the cavity was thoroughly irrigated and washed out with hot sterilized water, which, together with the sponges and dressings, was furnished by Mr. Julius Baldauf, of Henderson, Ky. The pulse, which was very feeble, came up wonderfully under the irrigation. The abdominal wound was closed, a glass drainage tube being left in with a provisional suture for closing the opening after removal of the drainage tube.

The subsequent history of the case is given by Dr. P. Ligon, of Rhobards, under whose care Mrs. G. was during my absence. As the treatment after operation in these cases is almost if not quite as important as the operation itself, Dr. Ligon deserves praise for his efficient conduct of it.

"Operation, June 14, 10 A. M.; Mrs. G., ovarian cyst; weight of patient before operation, 136 pounds—twenty days after operation, 90 pounds. Recovered from shock of operation and from anæsthetic well. Tablespoonful of hot water was given every three or four hours; vomited very often. Temperature at 6 P. M., 99° F.

"June 15th.—Temperature 7 A. M., 98.5°; 6 P. M., 98.5°. Vomited several times during the day. At 8 P. M., enema of whisky and milk. Vomited none through the night.

"June 16th.—Temperature 7 A. M., 98.5°; 6 P. M., 100°. Stomach quiet. ℥ij Rochelle salts were given, followed by enema of warm water at 6 P. M. Bowels moved twice during the night.

"June 17th.—Temperature 6 A. M., 98.5°; 6 P. M., 99.75°. No vomiting. Peptonized milk taken every two hours. Drainage tube was removed at 8 A. M. ℥j Rochelle salts given, followed by several actions from bowels during the night.

"June 18th.—Temperature 98.75°, 6 A. M.; 6 P. M., 98.5°. Rested well and feels well.

"June 19th, 20th, and 21st.—Temperature normal. Appetite good. Stitches removed.

"June 22d.—Sat up some and has good appetite.

"June 28th.—Had slight attack of malaria, which was easily controlled by quinine.

"July 10th.—Took the train for Henderson to make a visit."

Saw Mrs. G. on 11th July. Recovery perfect. Those present at the operation were Drs. John Young Brown, Arch Dixon, Jr., of Henderson, Thos. Bethel, P. Ligon, L. Cottingham (who kindly and efficiently gave the anæsthetics), L. Royster, of Cairo, Ky., and Dr. R. H. Moss, of Corydon, Ky. The main object in reporting this case is to call attention to the method of drainage, which was by the usual glass tube (Keith's), perforated near the bottom, placed in Douglas' sac and covered with iodoform gauze. The tube was emptied at short intervals by a piston syringe with a piece of rubber tubing attached. On the first day, two ounces of bloody serum were withdrawn, three ounces on the second, and two and a half on the third. The tube was removed on the fourth day. To my mind Keith's tube is a good one, but it is a trap-door for infection: the door is almost constantly open, and each time the syringe is used your patient is in danger. There can be no doubt that the intestines are the best of all drainage tubes, but there are cases in which the secretions are of such a character that the bowels cannot be relied on to remove them, and then artificial drainage is imperative. Keith's tube is perhaps the best, but could not something be contrived which would do away with the necessity for emptying this tube by the ordinary piston syringe with the rubber-tubing attachment? I have thought that perhaps if the glass tube was filled with strips of sterilized gauze, the strips being the full length of the tube, that the cavity could be kept drained by capillary attraction. If it became necessary to wash out the cavity through the tube, the strips could be removed for that purpose and be replaced again when the injection was finished. Be this as it may, I have known several cases in which secondary infection took place through glass tubes. To surgeons living in large cities, with the advantage of hospitals, well-fitted up operating rooms, and above all, of well trained nurses, this may seem a very ordinary case to report, but situated as country surgeons are, without any of these advantages, we have reason to congratulate ourselves upon the successful termination of operations of much less magnitude than the one mentioned.

THE *Columbus Medical Journal* says the weight of experience is that cocaine is more likely to show its toxic properties when injected into the urethra than when used anywhere else.

SOCIETY REPORTS.

HARLEM MEDICAL ASSOCIATION.

Stated Meeting, January 6th, 1892.

Dr. T. H. Manley presented a patient on whom he had operated for hæmorrhoids. Formerly the practice was to give ether and tie or remove these masses, and frequently much loss of blood would ensue with consequent shock. Should the patient be the subject of tuberculosis or syphilis, a chronic ulcer was apt to remain after the operation. A rectal stricture was occasionally noticed after the older methods of operation for hæmorrhoids. Any method which would tend to do away with these dangers must be of advantage. While in Paris, I saw Verneiul operate without general anæsthesia, using cocaine alone. The patient need not tie up and is often able to walk home after the operation. The patient I show you came to the hospital one week ago suffering intense pain from very large internal and external hæmorrhoids. An enema was given and the lower bowel disinfected. The index finger was then inserted in the rectum and a number of injections of a 1 per cent. solution of cocaine were employed, going around the anal margin and along side of the rectal wall. The total amount of the solution used would have made about 100 drops. The sphincter was then stretched with the fingers, and finally, the whole rectum was dilated first with the fingers then by a duck bill speculum. Little or no pain was caused. Since the operation—one week ago—the hæmorrhoids have been reduced to one-fifth the previous size. One great advantage in this way of treating piles is that one physician can perform the operation without any assistance—thus saving the patient expense.

Dr. Van Santvoord: I tried the method of manipulation described in this case and to advantage but used general anæsthesia by ether.

Dr. Gibbs: I also have used this method of dilatation for hæmorrhoids, but employed ether. I can understand the great advantage of employing cocaine and will make use of the suggestion.

Dr. G. H. Cocks: What amount of cocaine would Dr. Manley consider safe to be administered?

Dr. Manley: I have never employed more than I did in the patient before you, viz.: 100 drops of 1 per cent. solution—about 1 grain. I have never seen any evil effects follow the employment of the drug in my hands. One observer has reported 700 cases in which cocaine was used with a maximum dose of 2 grains with no unfavorable results.

Dr. Heiman related a case of a lady who had a fish bone fastened in her throat for one year and three days before removal. At the time it became lodged there, several physicians made the attempt to extract it without success, and as considerable blood was lost, she declined further treatment at the time. There had been no further suppuration, but there was considerable inconvenience in swallowing. When I saw her I employed cocaine freely in the pharynx, and with the mirror was able to detect the end of the bone protruding $\frac{1}{4}$ of an inch above the mucous membrane behind the posterior pillars of the fauces. With a pair of bone forceps I was able to extract it and present it for your inspection. You will observe it is nearly 1$\frac{1}{2}$ inches long.

Dr. T. H. Manley read a paper on the Pathology and Treatment of Diseases of the Hip, Knee and Ankle Joints in Children. (See p. 326).

Discussion—Dr. Jas. E. Kelly: I would endorse what Dr. Manley has so ably presented to us to-night. As a supplementary method of treatment of disease of the ankle-joint, I wish to show you an instrument which I invented some 10 years ago and which may yet be new to some of the physicians present. This model of club foot will show the principle involved. The shoe is supplied with a heavy tin sole somewhat saucer-shaped on the bottom and extending two or three inches on the outside from the foot. A band is placed around the calf of the patient's leg and elastic bands are run from this to the margin of the metallic sole. Thus, when the foot is implanted on the floor, the tendency is to assume the normal position, and with the rubber bands any amount of rotation required may be obtained. I have had considerable success while using this instrument.

Dr. E. L. Cocks: In diseases of the joints the diagnosis is seven-eighths of the treatment. The treatment is often very simple if we can only make a correct diagnosis. A short time ago I was called to see a child who had always enjoyed robust health, but was now confined to bed with considerable pain in the left hip-joint. The thigh was flexed on the body, and any motion of the limb gave him much pain. There was no history of tuberculosis in the family and the general appearance of the patient was very good, so I did not suspect tubercular inflammation. Ice was applied to the painful joint, and on the third day extension was employed. The patient

then began to feel better and it was with difficulty that he could be kept quiet. On the twelfth day a modified Taylor's long splint was used and still remains in position. It is a question in my mind when the splint should be removed.

Recently a lady patient of mine sustained an injury to her ankle and there was a doubt whether the external condyle were fractured or only a sprain of the ligament existed. She suffered considerable pain and swelling, but on the third day walked out, as the joint appeared to be better. This indiscretion was followed by intense pain and swelling. She now came to me for treatment and I put up the joint in plaster of Paris and kept it thus for three weeks, and when it was removed I found the parts in a perfectly normal condition.

One argument in favor of operation on diseased joints, where tubercles are suspected, is that a general systemic infection may thereby be prevented. A case came under my observation in a child eight years old who had a tubercular joint, and the patient suddenly developed fever and died of acute tuberculosis. Autopsy revealed cheesy masses in the lungs and other symptoms of a general tubercular infection. It is barely possible that if the joint had been excised the patient might not have developed the systemic infection.

Dr. R. Van Santvoord: The subject of the general pathology of joint diseases presents many interesting features. While a student I listened to the teaching of Sayre, who was opposed to "struma." He depended largely on the traumatic nature of joint diseases. Dr. H. P. Loomis has carefully examined the bronchial glands in a great number of patients who appeared during life to be in no wise affected with tubercular disease. It is remarkable in what a large number he found the bacilli of tuberculosis. We all inhale these bacilli, but they are destroyed before the system becomes affected. Suppose now a local injury to a joint and a certain amount of these bacilli are brought to the part by the blood and the power of resistance being enfeebled at the diseased part, a chronic tubercular joint may ensue. This theory may be in opposition to Dr. Manley's statements concerning the local character of many joint difficulties, but it seems reasonable that my proposition may be true. We know that ulcerative endocarditis is more prone to occur if the valves were previously diseased. Dr. Holt published a case of tubercular meningitis in a child, the determinating cause being a fall on the head. A case came under my observation of a supposed tubercular elbow joint. There were no other symptoms present of a tubercular disease. The patient died after a few days' illness of diphtheria. On autopsy a number of tubercular glands were found undergoing cheesy degeneration.

Dr. J. Gardner Smith: At the Vanderbilt Clinic we are accustomed to employ braces in a large number of the cases of joint diseases coming there for treatment. We always keep before us the suspicion of tuberculosis and syphilis and treat the patient accordingly. Dr. Manley must admit that a leg will become atrophied if the joint is diseased when the patient is put to bed for a length of time, even if braces or splints are not made use of. An advantage in the treatment of these cases with splints is that the limb will remain in a straight condition afterward, while if left to nature, it is sometimes so flexed that locomotion is interfered with. A few months ago a boy 10 years old came under my observation who had suffered from hip-joint disease for three years. There was almost complete anchylosis of the hip. No mechanical means had been employed and the knee was in such a position as to be in the way of a crutch. The foot was up against the opposite calf. The patient was put on the mixed treatment and a long splint applied and gradually pressure and traction were made to bring the limb straight. After treatment for three months he can now place the foot almost down to the floor. If the knee-joint is diseased there is hope of retaining its mobility if the patella remains movable. Rest to the joint when injured or diseased is, very often, all that is required. The application of a plaster of Paris splint frequently cures what appears to be a very serious difficulty. Even in cases of spasms of the muscles this treatment is very beneficial.

DR. A. H. LEARY,
Secretary.

NAPHTHALIN IN WHOOPING-COUGH.

Chavernac (*Lyon Médical*, November 15th, 1891) proposes naphthalin as a remedy for whooping-cough. He places about half an ounce of this substance in a capsule over a stove in the patient's room, which thus becomes filled with the vapors of naphthalin. He states that he has thus obtained a cure in a great number of cases. On the other hand, he has found that patients suffering from early tuberculosis cannot tolerate the vapor; he suggests that naphthalin vapor may thus be an aid in the diagnosis of early tuberculosis.—*Brit. Med. Jour.*

SELECTED FORMULÆ.

DYSENTERY.

Dr. Rossbach (*L'Union Médicale*, No. 9, 1891) speaks highly of the following:

℞
Naphthalin.....grains x.
Aq. bullient.....ℨ. ℨ iv.
Decoct. Malvæ.....0 i.
Inject by the rectum at a temperature of 100°.

ASTHMA POWDER.

℞
Powd. stramonium leaf.....parts 32.
Powd. belladonna leaf.....“ 32.
Powd. nitrate potass.....“ 4.
Powd. opium.....part 1.
Burn a little and inhale the vapor.

NEURALGIA AND RHEUMATISM.

℞
Tinct. iodine comp.,
Aquæ ammoniæ.....ää ℨ iss.
Pulv. camphor.....ℨ ij.
Chloroform.....ℨ ss.
M. Sig. Rubbed in three or four times a day.

—*Dr. Baltzell.*

TETANUS.

Dr. Mayer (*Revista clinica de los Hospitales*, No. 28, 1891) successfully treated a case of tetanus following a gun-shot wound of the thigh with the following formula:

℞
Morph. mur.....cgm. 1.
Chloral hydrat.....gm. 1.
Sod. bromid.....gm. 1.5.
Sufficient for one powder. Three to six powders a day.

Recovery followed after the administration of one gramme (15 grains) of morphine, eighty-one grammes 2½ ℨ) of chloral, and ninety-five grammes (3 ℨ) of sodium bromide.

ALUMINUM IN DIPHTHERIA.

Dr. E. Dickenshied, Spinnerstown, Pa., in a paper read before the Lehigh Valley Medical Association, states that aluminum was first used by his father a decade ago, in a case which he supposed to be hopeless diphtheria, as a disinfectant. The patient recovered, and since then 257 diphtheritic patients have been treated with but two deaths. The remedy is used in solutions as follows:

℞
Aluminum chloride.....dr 8.
Aluminum bromide.....dr. 4.
Boiling water.....dr. 64.
M. Sig. Place over a bath until dissolved.

Its local action on the diphtheritic membrane is to loosen it around the edge and to dissolve it rapidly so as to give the edge a very ragged appearance. Its astringent action reduces throat congestion. The solution is also used, in proportion of one to seven of water, as a gargle or in an atomizer, and at the same time the patient takes from five to ten drops.—*St. Louis Clinique.*

LARYNGEAL DIPHTHERIA.

According to Rosenberry, should be treated with the following:

℞
Ol. eucalypti,
Ol. terebinth.....ää ℨ j.
Ol. vaselini.....ℨ vj.
S. Use in a steam atomizer every half hour.

ULCERS AND GANGRENOUS WOUNDS.

Dr. Brown (*Lo Sperimentale*, No. 16, 1891) uses with success in ulcers and gangrenous wounds the following solution:

℞
Zinc sulphat.....grammes 5.75.
Aq. destillat.....“ 600.
Acid sulph. dil.....“ 16.

The parts are first washed with warm water and then the antiseptic solution applied on cotton. This dressing is changed every three hours. This causes the fœtid odor to disappear and promotes cicatrization.

ACUTE GASTRITIS.

Dr. Menche (*Lo Sperimentale*, No. 18, 1891) recommends the following in acute gastritis with dyspepsia:

℞
Acid mur. pur., } .....ää grammes 2.
Resorcin sublimat., }
Syrup corticis aurantior.....“ 20.
Aq. destillat.....“ 178.

RINGWORM.

(SHOEMAKER.)

℞
Cupri oleate.....dram ½.
Adipis benzoati.....ounce 1.
M. Fiat ungent. Sig. Use locally.

ERYSIPELAS.

The following (*La Independencia medica*, No. 42, 1891) has been found of service in erysipelas:

℞
Ichthyol.....grammes 15.
Lanolin.....“ 15.
Rub upon the erysipelatous surface and cover with salicylic acid gauze.

This prevents the spreading of the disease and calms the pain, in two hours to two or three days.

FORMULA FOR HYPODERMIC INJECTIONS OF QUININE.

Dr. Barillé recently stated to the *Société de Pharmacie* that the addition of antipyrine to the muriate of quinine enables the latter to dissolve easily. He recommends the following formula for hypodermic use:

℞
Muriate of quinine.....grains 15.
Antipyrine.....“ 7½.
Distilled water.....drachm ½.

The solution causes some pain when injected; the addition of ¼ or ½ grain of cocaine would be beneficial.—*La Médecine Moderne.*

CROUP.

Prof. N. S. Davis says all the indications for treatment, in croup, in the mild or superficial form of the disease, can be fulfilled by the administration of:

℞
Syr. ipecac.....ʒ ix.
Syr. scillæ comp.....ʒ iss.
Tinct. opii camph.....ʒ ij.
M. Sig. Half teaspoonful every three or four hours.

—*Ind. Med. Jour.*

TREATMENT OF INFLUENZA WITH CAMPHOR.

During the recent epidemic, when I had on an average 150 cases a week under my care, I had ample opportunity of testing the efficacy of various methods of treatment. Amongst other drugs, I tried camphor, and with so much success that I rarely prescribed anything else afterwards, six doses or less usually being sufficient. I administered it as follows:

℞
Sp. camph.....dr. ij.
Tinct. lavand co.....dr. ij.
Sp. chlorof.....dr. j.
Mucilag. tragacanth.....oz. ij.
Aq., ad.....oz. vj.
M. Sig. One ounce every four hours.

This costs very little, and by leaving out the flavoring agents the effect is the same and the cost nominal.—*F. W. Devereux Long, in British Med. Jour.*

PURGATIVE PILL.

Prof. Hare gave the following formula, which is very efficient:

℞
Aloin,
Ext. belladonnæ,
Ext. nucis vomicæ.....ää gr. v.
Ext. physostigmatis.....gr. ij.
Fiant pil. xx.
M. Sig. One at night.

—*Coll. Clin. Rec.*

JAUNDICE.

In a case of jaundice, resulting from catarrh of bile duct or biliary colic, which was sent from here to N. S. Davis, of Chicago, he prescribed:

℞
Hydrarg cor. chlor.....grs. 1-16 per dose.
Potassi chloridi.....grs. ii per dose.
Tr. cinchonæ.....ʒ v.
Tr. hyoscyami.....ʒ iii.
Drachm four times a day.

Recovery soon followed.

DIPHTHERIA AND CROUP.

Dr. Gibert, of Geneva (*Le Progrès médical*, No. 48, 1891), employs the following potion in diphtheria and croup:

℞
Pilocarpinæ.....gr. ½.
Ammon. carbonat.....grs. xxx.
Potass. chlorat.....grs. xlv.
Syrup polygalæ.....fl. ʒ j.
Cognac.....fl. ʒ v.
Aquæ.....fl. ʒ v.
A spoonful every hour until the patient begins to perspire.

TREATMENT OF SCABIES.

The following is given in *La France Medicale:*

Besnier's Method.—The entire body is rubbed with soap for fifteen to twenty minutes. Immediately afterward a lukewarm soap and water bath is taken. The following ointment is then rubbed in:

℞
Ess. lavandulæ,
Ess. caryophylli,
Ess. cannellæ.....ää ʒ ss.
Gum. tragacanth.....ʒ j.
Kali carbonat.....ʒ vijss.
Flor. sulfuris.....ʒ ijss.
Glycerini.....ʒ xlv.
M. Et fiat ung.

This ointment should be permitted to remain on the skin for twenty-four hours, during which the patient puts on clean clothes, the others being disinfected in the meantime. Then a bath is taken.

Brocq's Method.—This is a procedure adapted to cases in which the eruption is disseminated and to nursing infants. The following is applied:

℞
Ol. chamomil. camphorat.....ʒ xxv.
Bals. styracis.....ʒ v.
Ess. menthæ.....ʒ j.
M.

Or the following which is less irritating:

℞
Ol. olivæ.....ʒ xv.
Ung. styracis.....ʒ vj.
Bals. Peru.....ʒ j.
M.

Quinquaud's Method.—The following is used:

℞
Ung. styracis.....ʒ v.
Vaselini.....ʒ xxv.
M.

Or, a weaker preparation, such as:

℞
Bals. Peru.....grains lxxv.
Vaseline.....ʒ xxu.
M.

In nurslings, he recommends:

℞
Ol. chamomil.....ʒ xxv.
Ung. styracis.....ʒ v.
Ess. menthæ.....grains lxxv.
M.

Ernest Besnier uses the following in pregnant women:

℞
Beta naphthol.....grains lxxv.
Ether sulfuric.....q. s.
Vaselini.....ʒ xxv.
Ess. menthæ.....q. s.
M.

This is to be applied daily, for a week, a starch bath being taken every other day.

NEURALGIA.

We find in the *Memphis Medical Monthly* that Dr. W. M. Hightower recommends the following:

℞
Ammonii bromidi,
Sodii salicylatis.....ää ʒ j.
Tinct. hyoscyami.....ʒ ij.
Aquæ.....ad ʒ iv.
M. Sig. One teaspoonful every half hour until relief is obtained, or four doses have been taken.

THE
MEDICAL AND SURGICAL
REPORTER.

ISSUED EVERY SATURDAY.

THE BUTLER PUBLISHING CO., (Incorporated),
PROPRIETOR AND PUBLISHER.

EDWARD T. REICHERT, M. D., Editor,
(Professor of Physiology, University of Penna.,)
Office, S. W. Cor. 36th and WOODLAND AVE.,
Philadelphia, Pa.

CHAS. K. MOUNT, Advertising Manager.

DIRECT ALL COMMUNICATIONS TO
P. O. Box 843. Philadelphia, Pa.

TERMS: Five dollars a year, strictly in advance, unless otherwise specifically agreed upon. Sent 3 months on trial for $1.

REMITTANCES should be made payable to the BUTLER PUBLISHING CO., and when in sums of five dollars or less should be made by postal note, money order or registered letter.

THE POCKET RECORD AND VISITING LIST.

Two sizes. Prices to subscribers of THE REPORTER: For 30 patients a week (with or without dates), $1.00. For 60 patients a week (without dates), . . $1.25. Prices to non-subscribers, $1.25 and $1.50 respectively.

THE MODEL LEDGER.

Physicians who keep their own books will find this of great value. Enables the Physician to make out his bills with great ease, and gives at a glance the amount earned, received and due in any quarter. Sample pages sent on application. Price, $5.00.

BINDERS
FOR THE REPORTER.

Each Binder will hold copies of the Reporter for six months.

"The Medical and Surgical Reporter" stamped in gilt on the back.

PRICE, 50 CENTS.

PLEASE SEND MONEY WITH ORDER.

Address,

THE BUTLER PUBLISHING CO.,
P O. BOX 843. PHILADELPHIA, PA

LEADING ARTICLE.

TUMENOL.

While the list of new remedies that are constantly being brought to the profession's notice is very large, and the number of valuable ones comparatively small, yet, in spite of a gradually increasing feeling of caution on the part of the practitioner in embracing these newer preparations, those which possess any real merit are usually soon recognized. Thus it is that tumenol, a substance obtained from mineral oils, and recently introduced by the dermatologist, Dr. Neisser, appears to have come to stay, and is certainly daily gaining ground among these specialists abroad. The drug is used only as a topical application, and in the form of tincture, solution, oil, salve, or plaster; and, broadly speaking, occupies a position similar to that now held by zinc, with the exception that the claims for tumenol are even greater than those of the former useful substance, at least, in dermatological practice.

The solution has been proven to act more beneficially in cases of acute recurring eczemas of the face and hands, aud also in both acute and chronic eczemas of the extremities. In such cases it is used in a two or five per-cent solution in the form of a wet dressing. It forms a dry protective skin, and greatly allays the itching.

Neisser has also used the solution and tumenol gauze in the treatment of purulent and other discharges from the vagina; but while the remedy was well tolerated, the curative effects obtained were but slight.

Its greatest usefulness is undoubtedly when used as a salve or ointment of the strength of five or ten per cent. It may be made with vaseline or anhydrous lanolin as a base, and of a varying consistency subject to the requirements of the case. Again, the drug may be added to zinc ointment.

Various writers have repeatedly shown how tumenol ointment may be used with greater efficiency in almost every case in which zinc ointment is now used, and its supporters claim that its superiority over the latter preparation is most marked.

Upon ulcerating surfaces in cases of lupus, contagious impetigo, pemphigus, and the periods of desquamation and exfoliation of various other skin diseases, tumenol ointment is claimed to have been used with signal success.

In dry and squamous periods of various skin diseases the tincture gives better results than the salve. The tincture yields excellent results in almost any erosion accompanied by itching.

Tumenol-soap plaster seems to act better and more rapidly than either the plain or salicylated plaster. The oil when applied to the vesicles of eczematous patches acts promptly and beneficially.

Neisser has also used finely powdered tumenol-sulphonic acid as a dusting powder on ulcerating surfaces with excellent results.

In conclusion, the most recent reports of the drug justify our recommending it as a quick drier, a reducer of inflammation, and a healing and soothing application in eczemas, erosions, excoriations, superficial ulcerations, and various forms of pruritus. Its action upon the infiltrations of eczema is but slight, its beneficial influence being confined to the superficial, catarrhal, or desquamative forms of the disease, and especially in the acute forms.

The drug is undoubtedly a valuable one and deserving of serious consideration and trial.

CHROMIC ACID IN SYPHILITIC AFFECTIONS OF THE MOUTH.

For a long time past various largyngologists have recognized in chromic acid a valuable remedy for many diseases of the mouth and pharynx. Its special value is in syphilitic affections of this region, and within a recent date many writers of note have sought to bring the subject before the profession through the medium of medical journals. Among the most recent writings on the subject we have before us those from the pens of Schuster, Vidal, Paget and Feibel.

In placing the results of their experiences before our readers, we merely hope to give them points regarding the most judicious methods for the application of the drug, laying no claim for the introduction of any new therapeutic means, since, without doubt, chromic acid has long been recognized as one of our "stand-byes" in the treatment of syphilitic affections of the mouth.

Schuster has made it a practice first to scarify the syphilitic patches, and then apply a concentrated solution of the acid to the parts. This procedure he repeats once or twice a week until a cure is obtained. His results have been most gratifying.

Vidal, in similar affections uses a caustic solution of the acid (1 to 8, or equal parts of water). This he applies locally for one or two minutes, and then washes the parts with clean water. The treatment is repeated every three or four days until a cure is obtained.

Paget's contribution to the subject consists mainly in a record of the remarkable success which has attended the use of the acid in cases of lingual psoriasis.

Bethin, the London laryngologist, recommends the local application of the acid in cases of chronic superficial glossitis occurring in subjects who have previously had syphilis, and found mostly among habitual drinkers. Another writer, Butlin, recommends the local application of chromic acid three times a day, in the form of a half per cent. solution, as being most valuable in cases of ulcers of the tongue.

Finally, Dr. Ernst Feibel has used the acid in a variety of syphilitic affections of the mouth with such success that he has discarded all other remedies for it. He uses invariably a cauterizing solution of one part of the acid to two parts of water. In cases of syphilitic ulcers of the tongue when a long continued internal treatment had yielded no results, a few applications of the acid produced a complete disappearance of the sores. In these cases the remedy should be applied about every second day, and a week will usually suffice to bring about a cure. In cases of indurated lumps on the tongue a very few applications will effect a cure. The "opaline plagues" also disappeared quickly under its use, as well as ulcers in the angles of the mouth.

In that most troublesome and stubborn form of oral syphilis, described as *lingua geographica*, no other remedy acts in so potent a manner as chromic acid. In such cases the tongue should be first dried, then the solution applied with a camel's-hair brush, and after a few minutes the parts carefully washed. The cauterized tissue will be thrown off in the course of three or four days, and the normal tissue will be found under it. Four or five applications during the course of about two weeks will usually effect a cure. Naturally, cases have been reported in which the remedy did not give entire satisfaction. But in the large majority chromic acid will be found of inestimable value in syphilitic affections of the mouth, bringing about an immediate beneficial action, and leaving as a result a healthy condition of the mucous membrane.

BOOK REVIEWS.

DISEASES OF THE BLADDER AND PROSTATE. By HAL. C. NYMAN, M. D., Prof. of Surgery in the Mich. College of Medicine and Surgery; Member American Medical Association, Mich. State Med. Society, Mich. Surgical and Pathological Society, Detroit Academy of Medicine, Surgeon to Detroit Emergency Hospital, etc., etc. The Physician's Leisure Hour Library. Pub. by Geo. S. Davis, Detroit, Michigan.

Another small book having the above title, and one of the series intended to instruct physicians during their "leisure hours," has made its *début*, and will doubtless prove interesting to a certain class of readers who really appreciate the conciseness which is the chief reason for the popularity of this series. The present volume is an exceedingly useful one, and gives a careful resumé of the best and latest knowledge concerning the bladder and prostate, at the same time the author has not failed to insert his personality, and here and there records interesting cases to emphasize a remark. A great deal of technical knowledge is of course included, since it is necessary, seemingly, to satisfy the popular thirst for rules, methods, and explicit indications of all kinds upon the subject of operative procedures. Still, the author has also fairly presented the *principles* which should always be considered more important to the thoughtful surgeon than mere operative technique. In discussing supra-pubic cystotomy, which at the present time is so variously viewed by good surgeons, he takes middle grounds very wisely, and inclines to the more conservative side of the controversy.

As a book of ready-reference, and as a good synopsis of what is known concerning this section of the genito-urinary surgery, we cheerfully recommend it to the profession.

THE PRINCIPLES OF BACTERIOLOGY. A Practical Manual for Students and Physicians. By A. C. ABBOTT, M. D., First Assistant, Laboratory of Hygiene, University of Pennsylvania, Philadelphia. In one 12mo volume of 263 pages, with 32 illustrations. Cloth, $2.00. Philadelphia: Lea Brothers & Co., 1892.

The author of this new and shorter manual upon the principles and technique of the science of bacteriology has succeeded in getting together in compact and readable form much practical and useful knowledge upon this subject, especially for the beginner. The work is divided into two parts, the first of which tells exactly the materials to be used and the *rationale* of their employment, while the second is devoted chiefly to the description of their practical application in making bacteriological examinations. The illustrations of apparatus, etc., add value to the text, and it is only to be regretted that plates showing some the more commonly met with organisms were not included. We already have, however, in the works of Peyer and Cruikshank, at least two good books for more advanced students, and the present addition to our list must be considered a valuable one, since it presents in concise language most explicit directions for dealing with bacteria in the laboratory. We heartily commend it to students and physicians.

NO. 12. PHYSICIANS' AND STUDENTS' READY-REFERENCE SERIES. SYPHILIS IN ANCIENT PREHISTORIC TIMES. By DR. F. BURET, Paris, France. Translated by A. H. Ohmann-Dumesnil, M. D., Prof. of Dermatology and Syphylography in St. Louis College of Physcians and Surgeons, etc. F. A. Davis, Publisher, 1891. Price, $1.25.

The present number of this series is the first of three volumes to be issued upon syphilis, and therefore fittingly gives its history as far as Buret has been able to trace it. The mass of evidence which he has most ingeniously put together goes to show that syphilis is a very old disease. The author certainly deserves credit for his labors in this direction, and for presenting to us all the available facts which throw light upon the history of such an important malady. The subject is exhaustively treated, and all proofs of the existence of the disease in prehistoric and early

historical periods of each nation of the earth have been carefully collected and utilized by the author in forming conclusions. To everyone interested in the study of syphilis this little book will be welcome. The translation has not detracted from the value of the work, and, on the contrary, credit is due to Dr. Ohmann-Dumesnil for the very readable book he has produced, and also for his excellent notes with which it is interspersed.

LITERARY NOTES.

—A Journal of Pathology is about to be published in London. The new journal will be under the editorial charge of Dr. Sims Woodhead, who will be assisted by the principal pathologists of Great Britain and Ireland as collaborators and co-editors.

—W. B. Saunders announces the early appearance of several important works: An American Text-Book of Surgery, by Drs. Keen, White, Burnett, Conner, Dennis, Park, Nancrede, Pilcher, Senn, Shepherd, Stimson, Thomson, and Warren; also an American Text-Book of the Theory and Practice of Medicine, edited by Dr. William Pepper, to be completed in two royal octavo volumes. The writers for this work are Drs. J. S. Billing, Francis Delafield, R. H. Fitz, James W. Holland, E. G. Janeway, Henry M. Lyman, William Osler, W. Gilman Thompson, W. H. Welch, James T. Whittaker, James C. Wilson, and Horatio C. Wood. These books will be sold by subscription. Besides, he announces a New Pronouncing Dictionary of Medicine, by John M. Keating, M.D., and a work upon the Diseases of the Eye, by G. E. de Schweinitz, M.D.

WASHING BLANKETS MADE EASY.

If one has a suitable place for the purpose, the washing of blankets may become an easy matter, says the January *Ladies' Home Journal*. In an open space have a line tightly stretched out of doors. To this fasten the upper edge of the blanket. Have strips of cotton sewed to the bottom at intervals; tie these to pegs, which drive well into the ground. Now *turn on the hose*. Cold water, of course, and plenty of it. Drench the blankets well on both sides. If much soiled, rub spots with soap and drench again. The force of the stream will do more than wringing. After the article is quite clean, leave it to dry; never mind if it does rain; if the work has been thorough it will not streak, but be all the better for it. When the sun has completed the task, you will possess blankets as white, soft, and unshrunken as new, and the nap will not be destroyed.

PERISCOPE.

THERAPEUTICS.

COCAINE IN PERITONITIS.

Dr. Julius G. Kiefer states, in the *Kansas City Medical Index*, that the distressing pain and vomiting of peritonitis may be promptly checked by a suppository containing one grain each: extract of opium, cocaine hydrochlorate, and iodoform. It will be safe to use one suppository per rectum four hours apart, if the patient is closely watched for toxic effects, which may be noted by cold extremities and enfeebled heart action. I was led to the employment of the above on the theory of the malignancy of the affection and reversed peristaltic action of the bowel in peritonitis, and the well known anæsthetic properties of cocaine on serous membranes. Alimentation should be temporarily suspended, and enema must be avoided until vomiting is checked.

Any discussion will be thankfully received.

TREATMENT OF YELLOW FEVER BY COLD.

It is well known that yellow fever never develops in a cold or temperate climate, and several attempts have been made at various times to apply this fact to the treatment of the disease in tropical climates by artificially cooling the patient. Thus some thirty-five years ago trials were made with a cold chamber, the air of which was charged with oxygen, but without appreciable success. Quite recently Dr. Garcia has reintroduced a somewhat similar plan, an iced chamber being constructed so that the air within should be maintained at a temperature varying from 32° to 50° F., and nearly saturated with moisture. A fair trial was made with this at the works of the Juragua Iron Company in Cuba, where an epidemic of yellow fever had broken out, seventeen well-marked cases, in all of which black vomit was present, being treated by means of the "polar chamber." Eleven of them recovered, the mortality consequently being at the rate of 35.3 per cent., or about the same as the usual rate of mortality at the mines under other methods of treatment. The course and duration of the disease did not appear to be in any way modified by the low temperature; the urine, though in some cases considerable increased, was not altered qualitatively. The phenomena

depending on acholia occurred in the same manner and at the same period as in cases treated in the ordinary way. The same may be said of the gastric hæmorrhage. The cost of a patient's treatment by cold was found to amount to about $100.—*Lancet.*

ON THE EFFECTUAL AND SPEEDY CURE OF INFLUENZA.

Dr. John Crerar says, in the London *Lancet:* I have formed a new theory of the treatment of acute infective diseases, based on the "analogy of nature," whereby is meant such an inference, for example, that the earth is globular from observation of the uniform shape of other heavenly bodies. Applying this to the study of micro-organisms, I infer that their life and reproductive activity depend upon their inhabiting suitable nutrient media under fit conditions. Thus Klein tells us that a cubic centimeter of beef-tea, kept in an incubator at a temperature of 98° Fr., and peopled by bacilli, multiplies its population 80,000 times in the first twenty-four hours, 450 times in the second twenty-four hours, and only five times in the third twenty-four hours. We thus find that, as the food supply diminished, and the peculiar product of the fermentative process increased, the reproduction gradually declines and ultimately disappears. During the process of reproduction and growth of a micro-organism there is a peculiar substance excreted, or formed, which is baneful to its own microbe, and as this substance increases in quantity it diminishes the vitality of the microbe, and when it reaches a certain proportion it destroys the life of its microbe. When the yeast fungus is placed in an infusion of malt, it grows rapidly, at a suitable temperature, until the alcohol formed in its presence accumulates to twenty per cent. of the whole quantity of the liquid; the alcohol then arrests the growth of the fungus, and the alcoholic fermentation proceeds no further. In the same way, Dr. Burdon-Sanderson has shown that the peculiar secretion of a bacillus is very destructive to the bacillus itself. These facts are of the highest importance when pathogenic fungi are considered in their relation to disease. The application of such facts to the treatment of infective diseases would, then, consist in bringing about in the system a change in the environment of the microbes analogous to that which is spontaneously effected by their own activity, since they apparently excrete products which in sufficient quantity are inimical to their own existence. Hence the possibility of a disease exhausting itself, as it were, without any treatment, provided that the vital powers of the patient can resist the poison more than the microbe that produces it.

It appears, then, that we are continuously liable to attack, but if we can by any means (and I think we can) so alter the state of the body as to make it intolerable to the minute invaders, we secure a valuable truce and gain time to allow the organism to build up a vitality high enough to get beyond the reach of our remorseless foe, and we may thus save our patient. Hitherto the search for such a desirable agent has been chiefly carried on in connection with the cultivation and study of the pathogenic microbe. I propose to look for a similar substance in connection with the changes which invariably take place in the system of the patient during the acute stage of disease—I propose, in fact, to transfer a baneful and death-producing plant—the pathogenic fungus—from its congenial soil and climate in the tropic, to the uncongenial soil and climate of the Poles; and I confidently expect that, in its new situation, it will not long retain its power to do harm. I have practically applied this theory to the treatment of influenza with the happiest results. In the epidemic of 1889–90, I was face to face with an extreme case of this disease, when it was quite clear to me that something more than treatment upon general principles was necessary if I wished to save my patient. A process of reasoning, similar to what I have tried to explain, occurred to me at that time; and acting promptly on the indication to which it pointed, I artificially altered the prevailing state of the patient, with the result that the disease very speedily disappeared. I subsequently repeated my new line of treatment in hundreds of cases, with the same fortunate results. During the present epidemic (1891) I have pursued similar tactics with identical similar consequences. Let me briefly explain what has been occurring. I am called in to see a patient. I find him with a flushed, woe-begone face; intense frontal headache; increased temperature, at the same time perhaps that he is complaining of cold or shivering; a quick pulse, great prostration, and unspeakable distress. I prescribe, and when I visit him next day I find all the acute symptoms gone; no distress, pulse and temperature normal, and the patient comfortable, but weak. On inquiry, he declares, in nineteen cases out of twenty, that the relief was obtained after the second dose of the medicine—that is, within four or six hours after the commencement of the

treatment. Let me instance two cases as typical examples of many others.

CASE 1.—Mr. T—— is extremely ill, and believes himself to be dying; pulse 117, with the other acute symptoms mentioned. I venture to assure him that he will be nearly well by to-morrow. Next day I find him quite relieved, and the pulse reduced to 61.

CASE 2.—A. F——, a young married woman, who was taken suddenly ill, and when I first saw her she was raving and could not be made conscious of my presence. The next morning she was well, but weak, and I was assured that the second dose of the medicine marked the time of the amendment. On the third day she was quite well, dressed, out of bed, and attending to her duties in the house.

But I have not yet stated the exact nature of my *modus operandi*. Very important results can be obtained through very simple means. In the days of Sir Thomas Watson, the most intelligent answer to questions, "What is the best cure for acute rheumatism?" would be, "Six weeks in blankets, aided by drugs administered on general principles." But the salicylate of soda has changed all that, and has given us a short cut towards getting rid of the excruciating tortures of acute arthritic inflammation of a rheumatic nature; and so with other affections. Having regard to the essential state of a severe attack of influenza, I conceived that I would get the most effective antagonism in greatly increased alkalinity, and the *bicarbonate of potash* was the first agent I thought of. This salt has many advantages. It is not unduly stable to make it difficult to break up in the system. It is also readily eliminated, and thus soon leaves the system; so that the danger of potash poisoning is reduced to infinitesimal proportions. Having found this salt to answer all my purposes, I have not looked for another, although, according to my theory, other remedies of similar nature might easily give like results. I give liberal doses (thirty grains) in a teacupful of milk every two or three hours. I add a few drops of the tincture of capsicum, but this is not at all essential.

A word or two of caution. In two or three cases the action of the heart was weakened to an unpleasant degree; but digitalis and the aromatic spirit of ammonia quickly restored normality. Diarrhœa also sometimes supervenes, but is effectually met by Dover's powder. In cases where weakness is induced by previous disease, or where some other disease was a concomitant, or where pregnancy existed, the action of the remedy was somewhat retarded, but not rendered by any means less certain. Where the salt was intermitted too soon, the symptoms returned; but they readily gave way again on the resumption of the treatment. I trust that those who have the opportunity, will test the accuracy of my statements by careful clinical observations, as I feel confident they will obtain equally favorable results; for the remedy acts uniformaly and satisfactorily: *tuto, cito, et jucunde.*

MEDICINE.

CEREBRAL SYPHILIS.

As a result of his observations during a long experience, Tarnowsky (*Archiv. f. Dermat. und Syphilis*, No. 3, 1891) excludes progressive paralysis and tabes from among the manifestations of syphilis of the nervous system. It is his view that the debilitating influence of syphilis merely prepares the way for the development of progressive paralysis and tabes in those in whom there exists a congenital predisposition to these diseases. Tarnowsky makes the further proposition that if, in cases of syphilis with nervous manifestations, tabes and progressive paralysis can be definitely excluded, 90 per cent. will be cases of cerebral syphilis, in the majority of instances susceptible of cure.—*Monatshefte f. prakt. Dermat. und Syphilis*, July 15, 1891.

THE BACILLUS OF CHOREA.

Berkley (*Johns Hopkins Hospital Reports*, Vol. II, No. 6) reports one case of chorea insaniens in a woman and one of ordinary chorea in a dog in which he has made most careful post-mortem examinations. He concludes his paper with these remarks: "It would seem that chorea might be considered as a general systemic affection, acting with greatest intensity on the vascular system and lepto-meninges, and that its cause is to be sought for in a special bacillus or its toxical product, not a coccus, the staphylococcus aniens being only an accompaniment to the other germ, as in many other infectious diseases. The so-called "choreakörperchen" of Flechsig and Wollenberg are, so far as I am able to judge from the first writer's description, by no means peculiar to chorea; if I mistake not, they are to be found not only in the globus pallidus, but in other parts of the brain, not only in this affection, but also in normal as well as diseased brains.—*Univ. Med. Mag.*

ALCOHOLIC NEURITIS.

Dr. Ernesto Bruschini, of Naples, Italy (*La Reforma Medica*, p. 361, 1891), in a clinical lecture on alcoholic neuritis, recommends: Removal of the cause, hypodermic injections of morphine; antipyretics and analgesics are to be avoided, as they have a debilitating action. Hydrotherapy in general has an excellent influence. Electricity is also of service. In two cases of multiple neuritis the strong faradic current was found efficacious, one pole being held in the patient's hand, and with the other the current was run through the patient's entire body.

PAINS OF CENTRAL ORIGIN.

In discussing whether pain arises from central disease, Dr. Edinger (*Deutsche Zeitschrift für Nervenheilkunde*, Bd. i.) cites the case of a woman, aged 48, who had a slight apoplectic attack three years after the occurrence of endocarditis. The initial symptoms of the stroke were disturbances of sensation in the right limbs and slight transient defect of consciousness. Paralysis of these limbs, with hyperæsthesia and intense pains in the whole of the right half of the body, next developed. Eight months later slight athetosis in the palsied limbs and partial contracture in the arm were superadded. Temporal hemianopsia of the right eye was noted later. The constancy and agonizing character of the pains led to suicide two years after the fit. A small focus of embolic softening was found in the dorsal portion of the external nucleus of the left optic thalamus, extending backward into the pulvinar and slightly involving the internal capsule at the posterior region of Charcot's sensory crossway, the affected fibres apparently belonging to the temporal and occipital radiations. Secondary degeneration of fibres in the mesial portion of inner third of the corresponding crusta was seen. From the level of the posterior corpora quadrigemina downwards the left superior fillet showed fewer fibres than the right. In the medulla, above the piniform decussation, this degeneration affected the whole transverse section of the fillet, being more pronounced in the ventral half. When tracing the relationship between the clinical symptoms and the existing pathological anatomy, Dr. Edinger points out that the absence of degeneration in the pyramidal tracts and of exaggerated knee-jerks in this patient would appear to indicate that the disease of the thalamus has some influence in producing late rigidity. Between athetosis and typical posthemiplegic hemichorea many transitional grades of motor impairment have been noted by various observers. He is disposed to accept Charcot's view that these conditions depend upon destruction of fibres in the hinder part of the thalamus. The rare condition of hemianopsia, from capsular disease, without hemianæsthesia, was probably due to the small extent of the primary lesion. The pains and hyperæsthesia were presumably the consequence of direct contact of sensory fibres with the diseased patch. Descending degeneration of the cortical fillet has several times been observed in connection with disease of the posterior segment of the internal capsule, with or without involvement of the thalamus; hemianæsthesia usually has been associated therewith; very rarely has pain or hyperæsthesia been noted.—*Brit. Med. Jour.*

DOUBLE UNIOCULAR DIPLOPIA.

Thompson, a the recent meeting of the American Ophthalmological Society reported (*Ophth. Rev.*, September, 1891) the case of a lady, aged 34, who was stunned in a railway accident, and cut in the fronto-temporal region. At first she had homonymous diplopia from pressure on the scar, and paresis of the left external and superior recti muscles. Later she saw double with either eye alone, the images being distinct and separated diagonally upwards and to the right. Tested at various distances and in different ways, her account of the phenomena was consistent. Central vision was $\frac{20}{100}$ and there was great contraction of the visual fields. There were no ocular conditions to account for the impairment of vision or the diplopia. There seemed to be no other evidence of traumatic hysteria, but the opinion was that it was of hysterical nature as most of the recorded cases were. But it was admitted that it was sometimes a symptom of organic cerebral disease, and would then point to a lesion of the occipital lobe.—*Brit. Med. Jour.*

A NEW CLINICAL FORM OF DIABETES.

In an exhaustive paper, Dr. F. Hirschfeld deals with what he considers a new clinical form of diabetes mellitus; and his conclusions may be given briefly. In the majority of patients suffering from diabetes, notwithstanding the considerable amount of food introduced, assimilation continues good; but in a small number the ingestion of albumen and fat is very markedly diminished. This complication remains unaltered in the same patient for a long time. It does not appear that it results from disturbance produced by the

increased amount of food, for most diabetic patients are quite free from it, only a certain proportion being affected by it in a high degree. In no other disease known to us is a similar disturbance of the absorption of albumen and fat observed. The assimilation of fat only is affected in intestinal disorders, and especially in jaundice is much decreased. Whether the diabetic disturbance of assimilation always affects at the same time the two food-stuffs, fat and albumen, is not certain, although it is very probable. Certainly in all cases the lessened ingestion of albumen is evident. The absorption of carbohydrates was always good in the cases observed. The researches of Von Mering and Minkowski on the production of glycosuria, and impaired absorption of food, in the dog after removal of the pancreas, point to the relation of this complication of human diabetes; but it is still not very clear why so many diabetics possess such good assimilation. Clinically, there is a history of frequent and severe attacks of colic, at or prior to the beginning of the disorder, which do not recur later on. One of the most striking of the symptoms is that polyuria is absent, or present in only a slight degree. The urine accordingly appears of relatively dark color, and has frequently a sediment. The fæces are at times pale-colored, but to the naked eye there is no fatty matter apparent. The prognosis is most unfavorable; the explanation of this being that the nutrition of the organism must be carried on under great difficulties.—*Zeitschrift für klin. Medicin*, parts iii. and iv., 1891.

INFLUENZAL INSANITY.

It is rather alarming to be told by so eminent an authority in lunacy matters as Dr. Savage that attacks of influenza have proved to be a potent factor in developing latent weaknesses of the nervous system. The fact that no less than thirty-three cases of this kind came under his observation during, or soon after, the great epidemic, shows that it is a complication numerically of sufficient importance to merit more than a passing notice. There seems to be no disease of the nervous system specially referable to the action of the poison of influenza. All varieties may supervene, from suicidal melancholia to delirious mania, and from neuralgia to homicidal insanity. He narrates one case, indeed, which points to the possibility of influenza possessing a medico-legal interest. A man previously of exemplary conduct developed homicidal propensities during the period of intense mental depression which followed an attack of influenza, and though he fortunately did not kill his youngest child, as he intended to do, the impression left upon his mind amounted to delusional insanity, causing him to give himself into custody as having committed the crime. Had this explanation been broached earlier in the day, numbers of kleptomaniacs and other police small fry might have pleaded post-influenzal neurosis as an excuse for, if not as a justification of, the offences with which they were charged. Dr. Savage considerately vouchsafes a word of comfort in respect of the liability to nervous diseases. He tells us that, so far as he was enabled to make out, influenza was the precipitating and not the prime cause of the morbid process. In nearly all the cases symptoms of disorganization had been manifested prior to the attack of influenza, or the patient came of a highly neurotic stock. The number of people, therefore, who are likely to develop general paralysis or break forth into fits of maniacal excitement after influenza is comparatively small, and for this assurance we must be grateful.—*Med. Press.*

SURGERY.

SOME POINTS IN THE ADVANCEMENT OF THE OCULAR MUSCLES.

The principal points in Dr. Howes' paper read before the *N. Y. State Medical Association* were as follows:—

1. The necessity of always dividing the opposing muscle in cases of advancement. 2. In making the tenotomy, it is not well to attempt to secure the muscle by stitches. Still worse is it to divide the muscle, and then try to find it after it has retracted in the surrounding tissue. The best way is to secure it with a clamp. The clamp forceps formerly proposed by De Wecker are so large that it was necessary to remove them in case the patient was restless or vomited during the operation. A form of a clamp was shown by the writer, which is only about one and one-half inches long, very light but strong. After these forceps once clasp the tendon of the muscle firmly, it can be divided, and the instrument can then be left in place in spite of any struggles or movements of the patient. 3. In the introduction of the stitches, it is best to follow in general the plan proposed by Prince. The writer, however, modifies this by making a sort of "B" shaped loop through the conjunctiva, near the cornea, the perpendicular part being tangent to the edge of the cornea, then through each of the

loops a stitch is passed, from the corresponding corner of the divided tendon. By tightening the stitches, the muscle is advanced to the cornea. If any puckering of the conjunctiva occurs, this is snipped off. In this way, the muscle is not only held accurately in place, but the resulting cicatrix is smooth and produces no deformity. 4. In all cases, an overcorrection should be made, and the degree of that varying with the refractive condition of the eye, according to the well-known tendency to greater divergence in myopia than in emetropia or hypermetropia.

A NEW METHOD OF ESTABLISHING A GASTRIC FISTULA.

Dr. Witzel, of Bonn, describes a recently devised modification of the technique of gastrostomy, which, it is asserted, will prevent the escape of gastric juice, which in many instances causes so much trouble after this operation. The object of this procedure is to establish a canal, formed by stitching together the free borders of two parallel folds of the exposed wall of the stomach. This canal extends obliquely from the right downward and to the left, where it communicates with a small opening made into the interior of the stomach, and an arrangement is thus established which resembles the lower extremity of the ureter as it passes obliquely through the wall of the bladder. It is necessary, in practising this method, to draw a large extent of the anterior wall of the stomach through the external wound. This, it is stated, can be readily effected, when the stomach is collapsed, by gentle and prolonged traction. Two parallel folds following the above-mentioned course are then taken up, the free margins of which are brought together by three or four Lembert sutures, and by numerous ordinary sutures, over a flexible tube of the thickness of a lead-pencil, the lower end of which tube is inserted into the small opening made into the stomach, while the upper end is intended to project from the external wound. The canal thus formed, which should be about one and a half inches in length, is left exposed at the bottom of the wound when the stomach is fixed by sutures to the margins of the external incision. This modification does not necessitate any change in the other steps of the operation, and the surgeon can make the external wound according to his usual practice. Witzel exposes the sheath of the rectus by an incision made parallel to, and at a distance of a finger's-breadth from, the margin of the ribs; then, as is done in House's operation, he separates the fibres of this muscle in a vertical direction, and incises the transversalis obliquely from above downward and from the right to the left. The division of the rectus thus crosses the wounds made through the skin and the transversalis. Witzel, who has operated in the manner described on two patients, has had good reason, he states, for being well satisfied with the results, and believes that his expectation of establishing a gastric fistula capable of being effectually closed by valvular action has been fulfilled —*Centralblatt für Chirurgie.*

TO REMOVE FOREIGN BODIES FROM THE EAR.

Dr. Olivenbaum (*Norsk. Mag. for Lægevidenskaben*, No. 11, 1891) had a young gypsy boy come to him who, while playing with some glass beads, had gotten one into his ear, so that it rested up against the drum-head. He tried syringing, Löwenberg's agglutinative method—a small brush is dipped into glue, introduced into the ear, and allowed to dry on the foreign body—but also to no use. Pulverized alum warmed over the flame of an alcohol lamp was found to furnish an excellent and quickly-stiffening agglutinative substance. He proceeded as follows: Finely pulverized alum is heated in a teaspoon over an alcohol lamp. A wood splinter is dipped into the alum and then quickly introduced into the meatus, held up against the foreign body until it has stuck fast, when the same may be withdrawn. To prevent burning the walls of the ear, a piece of stiff paper may be introduced to line and so to protect them.

THE OPERATIVE TREATMENT OF GOITRE.

Dr. Bally has investigated the material at Socin's clinic, comprising seventy-seven cases of goitre operated upon between 1887 and 1890. He draws the following conclusions relative to the intra-glandular method of operation, which is preferred by Socin:—

1. Intra-glandular enucleation of one or more struma nodules, no matter what be their character, is feasible in most cases. This operative procedure is excluded, however, in malignant struma, and diffuse hypertrophies of the thyroid gland of a parenchymatous or colloid character, as well as in exophthalmic goitre and goitres containing numerous disseminated nodules.

2. In intra-glandular enucleation, it is necessary to find the layer between the cap-

sule of the gland and the strumous nodules, and this can usually be done without difficulty.

3. The hæmorrhage occurring during enucleation, or subsequently from the empty gland, is not, as a rule, dangerous. In the rare instances in which it becomes serious, there is always time enough to change the operative procedure, and to perform a partial extirpation after ligation of the thyroid vessels.

4. Injury to nerve fibres and the consequent paralysis of the vocal cords, can always be avoided by the employment of the intra-glandular method of operation.

5. As regards the chance of recurrence of tumors in those parts of the thyroid which have not been removed, intra-glandular enucleation gives as favorable results as partial extirpation.

6. The operation was never found to be followed by disagreeable consequences, such as tetany or cachexia.—*Centralbl. f. d. gesammte Therapie*, October, 1891.

MODERN RENAL SURGERY.

Dr. A. Obalinski (*Volkmann's Sammlung Klin. Vort.*), says regarding the treatment of severe inflammatory affections of the kidneys and their sequelæ:

Suppurative inflammation of the kidney and surrounding structures indicates the operation of nephrectomy in order that free exit may be given to the purulent and other inflammatory excretions, and that the focus of the disease may be thoroughly cleansed, and further extension to the suppuration to important parts (as, for example, the thoracic and abdominal cavities and the hip-joint) be thus prevented. In most cases the single lumbar incision, as was performed by Simon, will suffice, but when there has been extensive undermining of the peritoneum the formation of a large flap, as practised by Bardenheuer, is to be preferred, as such operation permits of ready access to all extensions of the main pus-containing cavity.

Ureteral fistula should always be treated by removal of the corresponding kidney, provided the surgeon can assure himself of the existence of a sound renal organ on the other side. Nephrectomy in such cases is indicated, not only on subjective grounds and when, for instance, the external flow of urine cannot be restrained by any apparatus and the patient is thus prevented from following his occupation and from enjoying a comfortable existence, but also on objective grounds, since, notwithstanding the utmost precautions, an old ureteral fistula may result in suppurative inflammation of the corresponding kidney and the adjacent soft parts.

Nephrectomy performed under these last-mentioned conditions offers much less favorable prospects than in cases in which there is an absence of suppuration or of cicatricial adhesions.

There can be no doubt that, under equally favorable conditions, the transperitoneal method can be performed more rapidly and with greater ease than the extraperitoneal method of nephrectomy, and that the progress toward recovery is more speedy after the former operation. The transperitoneal method, however, is not applicable to every case, and should be reserved for those instances in which the mischief is confined within the capsule of the kidney, the extraperitoneal method being indicated when the suppurative process has involved the perirenal structures.

OBSTETRICS.

GALEGA AS A GALACTAGOGUE.

Carron de la Carrière (*Revue obstétricale gynécologique*, February and March, 1891,) wishes to call renewed attention to galega as a galactagogue. He found from numerous experiments that the milk of the mother increased in quantity without any diminution of the quality, and that the children increased rapidly in weight. The aqueous extract is preferred, and can be administered in doses of 15 to 30 grains, three or four times a day.

Galega officinalis, galega apolinea and galega tephorsia are the constituents of the galactagogue, nutrolactis.

EXTRA-UTERINE GESTATION WITH PERFORATION OF THE VERMIFORM APPENDIX.

The diagnosis of disease of the vermiform appendix from pelvic inflammation due to disease of the uterine appendages is often a matter of great difficulty. The co-existence of the two conditions is of special interest, and a case reported in the October-November number of the *Bulletin of the Johns Hopkins Hospital*, by Dr. Hunter Robb, resident gynæcologist to the Johns Hopkins Hospital, Baltimore, is perhaps unique. Rupture of a tubal sac took place early in gestation, and a large hæmorrhagic effusion, presumably of slow formation, took place. The autopsy disclosed also perforation of the vermiform appendix,

a condition that had been suspected during life. Most instructive remarks by Dr. William H. Welch are appended, interesting more particularly with reference to the cause of the patient's sudden death.

MANAGEMENT OF ABORTION.

K. Ter-Grigoriantz, of Tiflis (*Centralbl. f. Gynäk.*, October 24th, 1891) has recently treated 60 cases of abortion with great success, owing to the stringent precautions which he adopted. In 8 the temperature was high, ranging from 100.5° to 105.8° F. In one of the 8 the patient had suffered for a week from fever before the author saw her. Septic peritonitis set in and she died two days after the removal of a broken-down fœtid mass from the uterine cavity. In the second there was a history of rough examinations, conducted by a mid-wife. The case recovered after twenty-five days of fever. The remaining 6 recovered after two or three days of the special treatment. Forty-eight out of the 52, where there were no high temperatures, recovered without any kind of complication. In 2 there was rise of temperature for a few days during convalescence; in 1 perimetritic pains set in, without fever, and passed away within a few days; and in 1 hæmorrhage occurred six weeks after abortion. The author's system was to throw up warm douches twice or three times daily and to give ergot in abortion in the course of the first six weeks of pregnancy. Iodoform gauze tampons were employed when hæmorrhage occurred. When the temperature was high, and in all cases of abortion over the sixth week, the membranes and remains of the ovum were carefully removed. This was done with the fingers alone when the os was still wide enough to admit two fingers. The sharp curette was used to scrape the uterus without the aid of the speculum, and after free washing of the vagina, when the os was wide enough to admit that instrument. When the os was small Hegar's dilators, from 7 to 9 millimeters in calibre, were used, and the sharp curette employed after dilatation. Thirty-nine out of the 60 cases were scraped. The process was done very thoroughly, the scraping being commenced at the point on the endometrium where the curette showed that there was most material to scrape away; then the instrument was made to scrape to the right and to the left of that point further and further out until all that was to be removed was taken away. In no case did any evil result follow the use of the curette. A 3 per cent. solution of carbolic acid was found sufficient to wash out the vagina and uterus in normal cases. When suspicious symptoms were present, especially high temperature, the following solution was used for the same purpose: Corrosive sublimate 1 part, carbolic acid 20 parts, boric acid 40 parts salicylic acid 5 parts, chlorate of zinc 10 parts, dissolved in 2,000 parts of water. For injections the author used a Fritsch-Bozemann's uterine catheter with the inner tube not less than 3 millimetres in diameter, else the fluid would not be able to escape freely and quickly, and the danger of carbolic acid poisoning would be considerable.—*Brit. Med. Jour.*

GYNÆCOLOGY.

THE ABUSE OF CATHARTICS IN GYNÆCOLOGICAL TREATMENT.

Loemer (*Centralblatt für Gynäkologie*, 1891, No. 46) calls attention to the fact that the excessive use of laxatives by women leads to paralysis of the muscular coat of the intestine. This condition can be overcome in time by careful regulation of the diet, sufficient exercise in the open air and massage, with the use of both the faradic and galvanic currents. In one case the writer suspended all laxatives and enemata, and persisted with this treatment for eleven (!) days before a movement of the bowels occurred, but after that they moved spontaneously, and the patient's health began to improve.

TWO CASES OF INTRA-UTERINE TAMPONADE.

Oui (*Arch. de Toc. et de Gyn.*, Sept., 1891) reports two cases in which the method recommended by Auvard in his work on Obstetrics, for the checking of hæmorrhage, was adopted with good results. In the first case (one of abortion at four months with retention of the placenta) the flow had already continued for twenty hours, and although it was not excessive the patient was rapidly losing strength. Efforts at dislodging the adherent placenta were futile. Oui, preferring intra-uterine to vagina tamponade, because of the better chances for antisepsis and the greater probability of its exciting uterine contractions, drew down the uterus, and by the help of dressing forceps packed the cavity with iodoform gauze. The tampon was withdrawn the next day, the placenta followed it, and the patient recovered normally.

The second case was one of placenta previa, in which an alarming hæmorrhage resisted all efforts at hæmostasis, such as intra-uterine

douches of hot water, injections of ergotin, and compressions of the aorta. Syncope was imminent. The iodoform gauze was at once introduced into the uterine cavity by the forceps, and packed with the fingers, also filling the vagina. Hypodermic injections of caffeine and ether, the administration of a punch and the acetate of ammonia were resorted to in order to combat the tendency to syncope. The tampon was removed the next day. Symptoms of septicæmia set in twenty-four hours after the removal, but the patient finally made a good recovery. Infection seems to have been due to direct or transmitted contagion from a patient who occupied the next bed to hers, and who died a few days later from septic peritonitis.

DYSMENORRHŒA AND ITS TREATMENT.

E. L. H. McGinnis (*New York Journal of Gynecology and Obstetrics*, January, 1892) says that dysmenorrhœa is the result of one of the following conditions:

1. Chlorotic or highly nervous temperaments (which are often closely associated).
2. An unhealthy uterus.
3. Inflamed ovaries.

Although not regarding electricity as a cure-all, the author states that the treatment, by this agent, of dysmenorrhœa due to inflammatory conditions of the uterus or ovaries, has yielded, in his hand, results far greater than were ever obtained by the use of tincture of iodine, carbolic acid, etc. The method of applying electricity is similar to the practice of Apostoli: After douching the vagina with an antiseptic solution, the intra-uterine electrode is introduced into the cavity of the uterus and passed up to the fundus. The positive cord is attached to this electrode, and the negative cord to the clay pad which is placed on the abdomen over the region of the uterus. The current is turned on very gradually in order to prevent any shock, the strength of the current not exceeding 30 milliamperes, and the seance lasting from three to five minutes. When the dysmenorrhœa arises from ovaritis, the treatment is begun a week before the expected time of menstruation and given daily for about eight minutes. The current is from a faradic battery and is employed as strong as can be borne without much pain. A flat, pliable electrode is placed over the inflamed ovary, and a similar one beneath the lumbar region as the patient lies on her back. After a few applications, the patient will usually be able to tolerate a ball-electrode, connected with the positive pole, placed against the ovary (the negative being on the abdomen), and a current of tension used three times a week. It is scarcely necessary to state that when dysmenorrhœa results from a chlorotic or nervous condition, the treatment by electricity is of secondary importance. The correction of flexions and the wearing of pessaries will also accomplish much for the relief of painful menstruation. Operative interference is required in certain cases—as in stenosis of the canal, polypi, vaginal stenosis or occlusion, imperforate hymen, and certain diseased states of the ovaries. The author asks for a trial of his method of treating ovarian dysmenorrhœa before consigning a patient so afflicted to the operating-table.—*Uni. Med. Mag.*

HELENINE IN LEUCORRHŒA.

Hamonic (*Rev. Obstét. et Gynéc.*, August, 1891) has had excellent results in the treatment of uncomplicated leucorrhœa from the internal administration of helenine. Raw helenine consists of a camphor, an anhydride, and a crystallizable principle — helenine proper. This principle acts powerfully when given internally in cases of acute or chronic gonorrhœa in the male, causing free discharge and increasing the pain without cutting the disease short. On the other hand, it seems to act specially on the glands of the uterine cervix. After a few doses it causes the uterine mucosa to become dry, and the glairy, viscous discharge of catarrhal endometritis disappears under the influence of the drug. Hamonic finds that helenine acts without the aid of any local treatment. It sometimes causes gastric disturbance and diarrhœa, but these complications are exceptional. He finds it best to give raw helenine as a pill, together with inulin, a white amylaceous matter also extracted from elecampane root. Inulin is, however, inert, and confection of roses or any similar vehicle will do as well. The following is the composition of the pill described by Hamonic: ℞ Raw helenine, inulin, aa 15 grains, with sugar of milk q. s., to be made into 100 pills; 2 to 4 to be taken in the twenty-four hours. Helenine is a failure as a local remedy, as it irritates the vaginal mucous membrane.—*Brit. Med. Jour.*

THE TOAD POISON has been found by Schultz (Nature) to be excreted by special glands in the skin, entirely distinct from the mucous glands, and which are confined to the back of the body, limbs and head. This poison acts as an anæsthetic.

PÆDIATRICS.

RESULTS OF REVACCINATION IN 464 CHILDREN.

Dubousquet and Jasewicz (*Bulletins et Memoirs de la Société de Medicine Pratique*, November 1, 1891) give the results of the revaccination of four hundred and sixty-four boys and girls in the public schools of St. Owen. Although one hundred and ninety-one of these had been vaccinated one year before, and most of them with success, yet the revaccination succeeded in 41.87 per cent. of cases. In 1890 an antiseptic wash was used before making the puncture; in 1891 no wash was used. There were no more accidents without it than with it. The highest percentage of success was among the youngest scholars. A large percentage of those who had been successfully vaccinated in 1890 were also successfully vaccinated in 1891. One girl of eight years had been successfully vaccinated in infancy, two years before had had smallpox, and was now revaccinated with success. The conclusions derived are: The necessity of vaccinating children of four to eight years of age, and at frequent intervals thereafter, and of general revaccination in time of epidemics.—*Univ. Med. Mag.*

HYSTERIA IN INFANTS AND CHILDREN UNDER TWO YEARS.

M. Ed. Chaumier, of Tours, read a paper on this subject at a recent meeting of the Académie de Médecine in Paris. He thinks that in very young children hysteria is often overlooked and mistaken for other things. Its symptoms vary according to the severity of the attack. When very slight, it takes the form of frequent causeless attacks of passionate screaming. In more marked cases, the limbs become more or less rigid and the face purple and congested, and sometimes these symptoms are accompanied or followed by tremor. When more severe, the child suddenly begins to cry, and loses consciousness completely: the body is usually stiff and the mouth wide open, but sometimes the body is flaccid. In some cases, these attacks come on in the middle of a fit of coughing, and they are then apt to be mistaken for false croup. He also describes a more aggravated form of the disease, in which the symptoms resemble those met with in adult cases. The child loses consciousness, and becomes quite rigid, with its eyes turned up, and the stiffened limbs may twitch or they may be thrown about wildly. In other cases, the body is quite flaccid and inert. Sometimes such attacks occur at short intervals; they are then often mistaken for meningitis. Hemiæsthesia and hyperæsthesia may exist, but they are almost impossible to make sure of; but contracture and paralysis cannot be overlooked, nor can the absence of the ocular and pharyngeal reflexes, which M. Chaumier has frequently observed. The prognosis is favorable. Recent investigations prove that hysteria is more easily cured in the infant than in the adult; and there is reason to believe that the earlier the treatment is begun, the more likely is it to be successful.—*La Semaine Médicale*, 2d December, 1891.

QUININE AS A REMEDY FOR WHOOPING-COUGH.

Ungar (*Deutsche medicinische Wochenschrift*, April 30, 1891) claims that quinine, although proposed as a remedy for pertussis by Binz in 1868, has not received the attention it merits in the treatment of this disease. From an experience of six years he believes that, after its administration for several days, the severity of the paroxysmal coughing lessens, and the frequency of vomiting and the number of attacks diminish. In some cases the intensity of the paroxysms is unaffected, but their frequency diminishes, and later they become less severe. The disease, however, takes a milder form, and in fourteen days from the commencement of the treatment there is only an occasional attack, or even none. A few cases of failure should not condemn the method, and he attributes unfavorable reports of its success principally to insufficient dosage. He prescribes, three times a day, as many decigrammes as the age counts years, for children up to 4 years of age, and with older children does not exceed a daily dose of 1.2 grammes, except in severe cases in robust children, when he sometimes increases the daily amount to 1.5 grammes for one or two days. To children under 2 years a proportionately larger dose is given, an infant of 3 months receiving 0.05 grammes at a dose, while a 6-months baby may be given 0.1 gramme. These doses are continued for five or six days, seldom as long as eight days. Correspondingly with improvement, the daily doses are decreased from three to two, and finally to one, usually given at night. In case the drug cannot be given in solution or capsule, the bimuriate may be employed hypodermatically.—*Univ. Med. Mag.*

TRANSFORMATION OF VIRUS.

Dr. Chauveau concludes a work on this subject, read at the Paris Academy of Medicine, as follows: 1. Vaccinal virus never gives variola to man. 2. Variola virus never gives vaccinia to the cow or horse. 3. Vaccinia is hence not attenuated variola and cannot be compared to benign anthrax infection communicated to animals by the inoculation of attenuated anthrax virus. 4. If vaccinia is derived from variola, it is by means of a radical transformation of the variola virus, up to the present time beyond the knowledge of experimenters. 5. The attenuation of virus is not an operation that can be identified with transformation.—*Gazette des Hôpitaux.*

BACTERIA IN DRINKING WATER.

Dr. W. Migula (*Centralbl. f. Bakt. und Parasitenk.*, Bb. VIII., No 12, p. 353) makes a contribution to our knowledge of this subject which is really a new departure as regards the examination of drinking water. He points out that, although considerable stress has been laid on the examination of water for pathogenic organisms, there is no reliable rule to guide the hygienist in his examinations for the ordinary saprophytic organisms and their relation to the purity of water to be used for drinking purposes. Dr. Migula washes out small flasks with bichloride of mercury; then, after rinsing them with the water to be examined, he leaves a specimen in the flask, which is plugged with sterilized cotton wadding and covered with an india-rubber cap. It is not necessary to pack the flasks in ice, as it is assumed that if any of the organisms multiply they will all do so, while if the putrefactive organisms (those that liquefy gelatine) grow more rapidly than the others, independent evidence is obtained of the impurity of the water. Cultivations are made in flat glass dishes in order to save the time required in manipulating plates and tubes during the cooling process. After examining 400 springs, wells, and streams, the author has come to the conclusion that where there are more than ten species in any sample of water, especially when these are not species ordinarily met with, the water should not be used for drinking purposes. He found that in only fifty-nine waters was this the case, but that 169 waters contained more than 1000 organisms per cubic centimetre, sixty-six of these having over 10,000 (forty over 50,000). From these figures it will be seen that some of the sources of supply would be condemned by the old method but would be passed by the new, and some condemned by the new would be passed by the old. Migula found in all twenty-eight species, and in a series of tables he brings out the fact that the number of colonies does not by any means correspond with the number of species, though in some cases it undoubtedly does so. This is, in fact, an exceedingly variable quantity. It also comes out that putrefactive bacteria are almost invariable absent from spring water; that they are most frequently found where the number of species is great, and where the number of colonies is between 1000 and 10,000 per cubic centimetre; that they also occur where the number of germs is below fifty per cubic centimetre, but very seldom where the number is over 10,000.

Dr. L. Schmelk, who recently (*Centralbl. f. Bakt. und Parasitenk.*, Bd. IV., No. 7, p. 195) pointed out there is a great increase in the number of bacteria in the water supply of Christiana during the period that the upland snows are melting most actively, now (*Centralbl. f. Bakt. und Parasitenk.*, Bd. VII., No. 4. p. 102) gives further evidence collected during the last three years in proof of his theory. The numbers he finds for those years were ten or fifteen per cubic centrimetre in March to 2500 in April, 1888; 1100 in 1889, and on March 28th, 1890, 5000; the breaking up of the winter snows having occurred this year much earlier than usual. This is the period during which the winter snows are melting, and after this is completed there is no marked increase in the number of bacteria in the lake water until the reappearance of the winter snows, some of the earlier falls of which during October, November, and December melt and disappear. In December the number of bacteria per cubic centimetre sometimes reaches 600, the highest point recorded during the year except in March. Dr. Schmelk thinks that the increase is due to the action of frost in breaking up the earth's surface, from which the contained organisms may be set free as soon as a thaw occurs and then washed away along with the surface soil, just as during great rain-storms. He also points out that the masses of ice projecting into a river may form "collecting" points for the particles suspended in the flowing water, as more bacteria are always found in the water obtained from such ice when melted than in the river water itself. He verified this by repeated experiments. He found, however, that when floating ice was melting in water, though it contained a few more organisms

than water collected near the surface, it held far fewer than water taken from a considerable depth. In the Christiana water-supply he found some thirty species of bacteria, some of which occurred very seldom, some at certain periods of the year only, and a few all the year round. The amount of solids in the water varies from time to time, between 0.92 and 0.94 grammes per litre, and traces of ammonia can usually be found in water during the time that it contains most bacteria.—*British Medical Journal.*

MEDICAL CHEMISTRY.

A NEW METHOD OF ESTIMATING UREA.

K. A. H. Moerner and John Sjögvist have divised a new method of estimating urea which is specially intended for use when accurate results are required.

The most commonly used method at the present time is that by means of hypobromite, and measuring the nitrogen given off, each cubic centimetre of which is reckoned as equivalent to 0.0027 gm. of urea. It is, of course, well known that this method is affected by errors, but the latter are not considered of sufficient importance to render this easy and rapid method unsuited for clinical use. In fact, it is not likely that the hypobromite method will readily be displaced by any other, unless absolute accuracy is required.

The two physiologists above mentioned, however, were in search of an *accurate* method, sufficiently easy and rapid to take the place of the elaborate methods heretofore necessary.

Among these is that of Bunsen, and this has long been regarded as one of the most exact on record. But it also suffers from some sources of error.

The general principle by which the authors operate is to determine the nitrogen of the urea separately from nitrogen derived from other sources. The method of execution is as follows:

Five cubic centimeters of the urine are mixed in a flask with 5 cc. of a saturated solution of barium chloride containing 5 per cent. of barium hydrate. Next, 100 cc. of a mixture of two parts by weight of 97-per-cent. alcohol and 1 part of ether are added, and the whole set aside, well stoppered, until the following day. The insoluble residue is then collected on a filter, and washed with enough of the ether-alcohol. If the filter pump is used, only about 50 cc. of the liquid will be required. Without the pump more liquid will be found necessary and the washing consumes more time. The filtrate is deprived of ether and alcohol by distilling at a temperature which should under no circumstances exceed 60° C. This is best accomplished by connecting the receiver with the filter pump. If no filter pump is available, it is usually preferable to evaporate the ether and alcohol on a water bath, since it is easy here to adjust the temperature below 60° C., while this may be exceeded during ordinary distillation.

When the residue measures above 25 cc., a little water and calcined magnesia are added, and evaporation continued until the vapors no longer show an alkaline reaction (from escaping ammonia). This is usually the case before the liquid has been concentrated to about 10 cc. (The addition of calcined magnesia, above directed, is absolutely necessary if there is any considerable amount of ammonia present.) The concentrated residue is transferred into a flask, water being used to wash the capsule, then mixed with a few drops of sulphuric acid and evaporated on the water bath.

The residue in the flask now contains no other nitrogenized substance besides urea. This is determined by Kjeldahl's method, viz., heating with strong sulphuric acid until the nitrogen compound is entirely decomposed, sulphate of ammonia being formed; this is then decomposed by soda, the ammonia caught in standard acid, and from its quantity the amount of the nitrogen compound calculated.

Accordingly, 20 cc. of pure, concentrated sulphuric acid are added to the contents of the flask, and the latter heated over a naked flame until the liquid has become colorless. Pure soda (free from ammonia, the absence of which in all ingredients must be assured) is now added, and the escaping ammonia caught in a measured quantity of volumetric sulphuric acid. The excess of the latter, left unsaturated, is afterwards titrated back by baryta [standard soda would seem to us preferable, as this will not cause a precipitate], litmus being used as an indicator.

The authors tested the method upon pure urea. By Kjeldahl's method this yielded, as a mean of 5 determinations, 46.801 per cent. of nitrogen, theory required 46.74 per cent. —From *Skand. Arch. f. Physiologie* (by F. Holmgren), 8vo. Leipsig, 1891.

Displacement of the uterus is almost the sole cause of the vomiting of pregnancy.

NEWS AND MISCELLANY.

A PRESCRIPTION.

My pallid friend, is your pulse beating low?
Does the red wine of life too sluggishly flow?
Set it spinning through every tingling vein
By out-door work, till you feel once again
Like giving a cheery school-boy shout;
Get out!

Are you morbid, and, like the owl in the tree,
Do you gloomily hoot at what you can't see?
Perhaps, now, instead of being so wise,
You are only looking through jaundiced eyes;
Perhaps you are bilious, or getting too stout;
Get out!

Out in the air where fresh breezes blow
Away all the cobwebs that sometimes grow
In the brains of those who turn from the light
To all gloomy thoughts instead of the bright
Contend with such foes, and put them to rout;
Get out!

FOR BETTER TREATMENT OF CRIPPLES.

AN APPEAL FOR AN ORTHOPÆDIC DEPARTMENT AT THE PHILADELPHIA HOSPITAL.

At a meeting of the Bureau of Charities and Corrections a communication was received from H. Augustus Wilson, M. D., relative to the establishment of an orthopædic department at the Philadelphia Hospital. In his letter Dr. Wilson says that his attention has been called by medical officers, nurses and medical students connected with and attendants at the clinics of the Philadelphia Hospital, to the absence of that prolonged attention to cripples which modern surgical practice has established as necessary, not alone for the correction, but as well for the prevention of deformity. The short terms of duty of the attending surgeons, he says, and the scattering through the many departments of these cases of cripples is not conducive to their best interests, and necessarily the prevention of deformity is often ignored. The trained nurses that are graduated from this almost perfect training school are deficient in knowledge of matters pertaining to orthopædic surgery, he says, and are obliged to seek elsewhere the opportunity of learning.

The vast number of cases appropriate to such a department, Dr. Wilson continues, are not now systematically used for the instruction of medical students and physicians in the application of surgical, mechanical, gymnastic manipulatives, and therapeutic measures, devoted primarily to the prevention of deformity and correction of deformities already formed. In conclusion, he urged the appointment of one or two orthopædic surgeons to have continuous charge of such an orthopædic department.

The matter was referred to the Medical Board, who were requested to hold a meeting and consider the question of organizing such a department. Should it be determined to organize this department, the Medical Board will advise the Bureau of Charities and Corrections as to the manner of organization.

R. F. Longacre was elected a district physician to succeed Dr. H. B. Martin resigned, and Joseph S. Phifer was appointed messenger at the office of the Bureau of Charities and Corrections.

Cuticura, Packer's Tar,
Vinolia too, ten cents a bar,
Pears' and Ivory and Oat Meal,
Carbolic Acid, White Castile,
Woodbury's Facial, Shandon Bells,
Thus the catagory tells
By its great and wondrous scope
That while there's life, there's always soap.
—*Pharmaceutical Era.*

A new coffee adulterant, since the artificial beans have been made quite impossible, consists in roasted coffee beans treated with water for its extractive, which have been roasted a second time after dipping into a sugar solution. The latter re-imparts color and gloss.

THE TEMPERATURE OF DRINKS.

A writer in a German paper gives the following as the proper temperatures for different sorts of beverages: Water, 54°; seltzer water and beer, 57° to 60°; red wine, 62° to 66°; white wine, 60°; champagne, 46° to 50°; coffee, 73° to 79°; beef-tea, 100° to 125°; milk, 60° to 64°; hot milk, 93° to 95°.

One of our well-known Philadelphia pharmacists has recently received the following written orders for medicine:—

A dose of castor-oil for a child 15 years old. Be sure and send enough to work her good.

1 Doz. 2 oz. Quinine pills.

1 Bottle Honeatta water.

A. Boo Gee.

1 box of Brandteth's pills, sugar quoted.

Please send enough appecac to throw up a four months old baby.

Two five grain blue mask pills.

10 cents worth partiaspated chalk.

To these we will add, from our personal knowledge, the fact of a colored girl always asking for *constipated* lye, when sent for the concentrated article.—*Coll. Clin. Rec.*